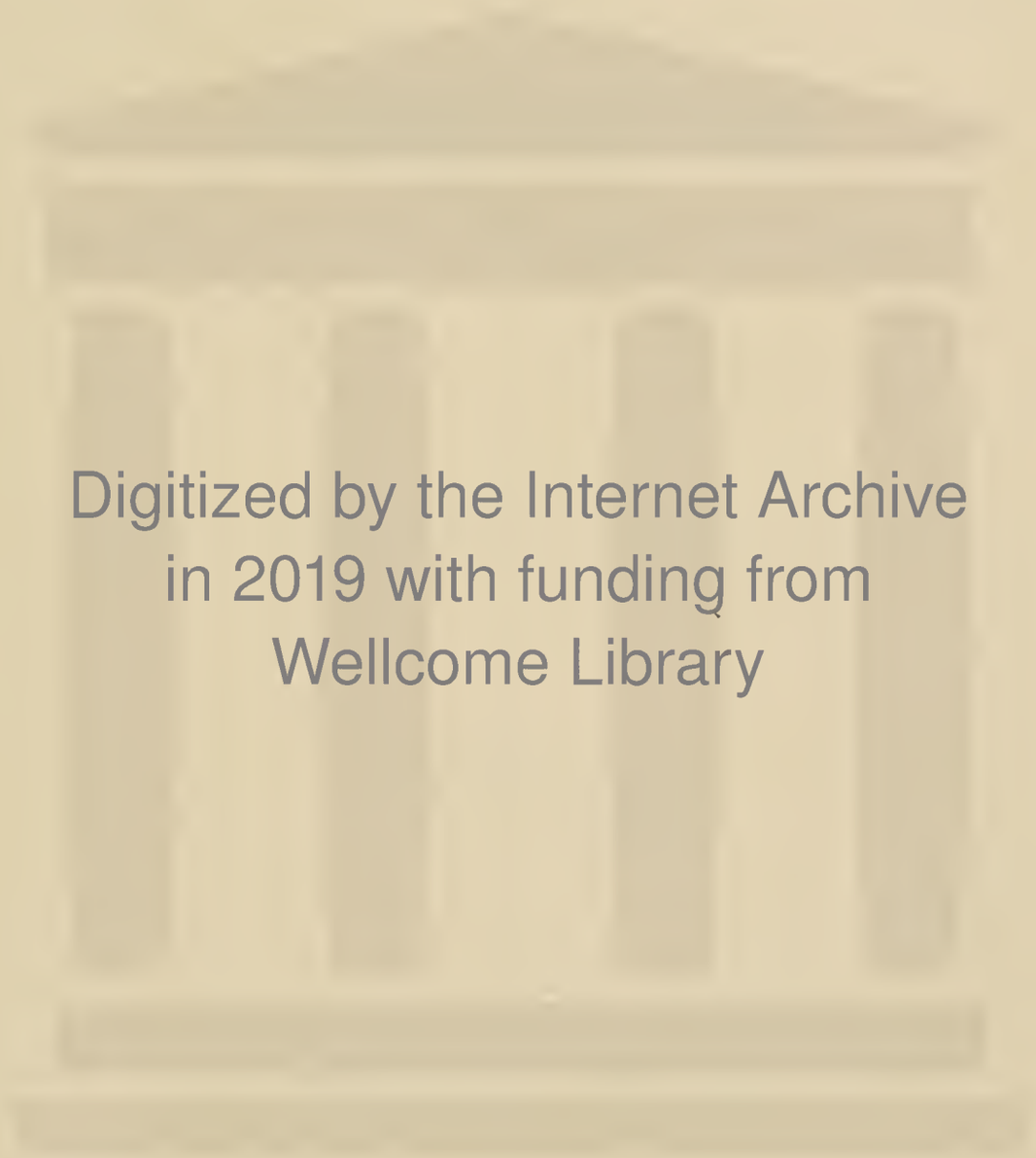
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THE MIDLAND

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AND

TOPOGRAPHICAL AND STATISTICAL

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THE MIDLAND

Medical & Surgical Reporter,

AND

TOPOGRAPHICAL AND STATISTICAL JOURNAL.

HOMO, NATURÆ MINISTER ET INTERPRES, TANTUM FACIT ET INTELLIGIT, QUANTUM, DE NATURÆ ORDINE, RE VEL MENTE OBSERVAVERIT; NEC AMPLIUS SCIT, AUT POTEST.—BACON, NOVUM ORGANUM.

No. XIII. AUGUST, 1831.

THE EDITORS' ADDRESS.

THE Editors, at the commencement of the third volume of their work, beg leave to draw the attention of the Public, and of the Medical World in particular, to the great success which has attended their undertaking. Their Journal has precedence, in point of time, of all the Provincial publications of a similar description, the Editors may therefore, without presumption, congratulate themselves upon the good effects of their example. The Midland Journal has a distinguishing feature, which peculiarly entitles it to the patronage of men sincerely devoted to the advancement of Science: the Editors have uniformly excluded from their pages all communications not decidedly original. Whatever may be the value of the matter, (and much of it has been contributed by Gentlemen of acknowledged talent and information), that matter has not been extracted from contemporary Journals; and, considering how very common this practice has become, there is some merit in this steady adherence to the reception of original papers only. The Editors seize this opportunity of returning their most cordial thanks to their numerous and able contributors, and of earnestly soliciting the communications and subscriptions of those to whom their undertaking may have been before unknown; and they pledge themselves, that no exertion shall be wanting on their part, to render their Journal a fit repository of valuable contributions.

Worcester, July 30, 1831.

ARTICLE I.

History of the College of Physicians.

No. 1.

No one can consider the present aspect of the world, without remarking that an undefined desire of change, and a never ceasing restlessness, are the prevailing characters of the age. In many countries, old and hallowed landmarks have been swept away with relentless precipitation; and even in our own land, all respect for what is ancient, all veneration for the wisdom of past ages, is nearly destroyed. From this active spirit, the medical republic is not free. Our institutions have been attacked with fierce and indiscriminate hostility, and so narrow is the ground upon which the conservative party stand, that we almost wonder that they have been so long able to resist the assaults of their opponents. In this state of things, we think that some beneficial effects may flow from a calm inquiry into the history of the College of Physicians, and we are much mistaken, if this will not lead every candid mind to regard that institution with gratitude for its past services. If, at the same time, we should prove that many defects now exist in this learned society, and that now it does not fulfil the intention of its first establishment so thoroughly as it might do; we shall do so in no feeling of enmity, with no expression of bitterness. Its members are honourable, and many of them learned men, and it would be difficult to find an equal number in any other class of life, who so truly deserve the title of Gentlemen. Nor to those who look with strong affection to their profession, will such a commendation appear indifferent. For it unites qualities the most important to society, the most dignified, and the most virtuous. It prohibits every thing that is sordid, mean, or dishonest; it seeks success only by honourable industry and generous emulation; it enjoins all that can dignify the man, or adorn the Christian. We shall never, then, impugn the motives upon which the college has acted; we may believe its members to have been frequently mistaken, and to have erred from ignorance or from oversight; but we shall still give them credit for the integrity of their motives, and the uprightness of their principles.

In order to estimate the value of the College of Physicians, we should take a review of medicine, at the period of its establishment, and compare it with the progress which has been made since. It will then appear that, in the fifteenth century, England was overrun with quacks of every kind; that they nearly engrossed the whole of medical practice, and that even educated physicians themselves condescended to frauds and impostures, which degraded both the practitioner and his art. They pretended to be adepts in the occult sciences; they sought for the philosopher's stone, and the Elixir of Life; their directions were

intended to impose upon the understanding, and to astonish the ignorant; no practice was too mean, no art too degrading, providing it was calculated to fill the pockets of the physician.* The following well-known description of the Doctor of Physik from Chaucer, is the very image of the age.

With us there was a Doctor of physik
In all the world was ther non him lyk
To speke of physik and of surgerye
For he was grounded in Astronomy;
He kept his patient a ful gret del
In hourys by his Magyk Natural.
Wel couth he fortunen the ascendent
Of his ymagys for his pacient.
He knew the cause of every maladye
Were it hot or cold or moist or drye,
Where they engendere and of what humour
He was a very parfyt practysour,
The cause yknowe, and of his harm the rote
Anon he yaf† to the syke man his bote.‡

* John of Gaddesden, who lived in the beginning of the fourteeth century, and who, notwithstanding the pleasantry which Dr. Friend has displayed respecting him, was a man of considerable attainments, ordered patients afflicted with small pox, to be wrapped up in scarlet, and every thing about the bed to be red, and maintains that, in this manner, he cured one of the princes, without leaving a single mark. He describes many things in his book which would now be considered below the dignity of a physician, such as cosmetics, etc. and openly states that he always ordered twice as much for the rich as for the poor.

"Because there are many children and others afflicted with epilepsy, who cannot take medicines, let the following experiment be tried, which is recommended by Constantine, Walter, Bernard, Gilbert, and others, which I have found to be effectual, whether the patient was a demoniac, a lunatic, or an epileptic. When the patient and his parents have fasted three days, let them conduct him to a church. If he be of proper age and in his right senses, let him confess. Then let him hear mass on Friday, during the fast of the quatuor temporum, and also on Saturday. On Sunday, let a good and religious priest read over the head of the patient in the church, the Gospel which is read in September, in the time of vintage, after the feast of the Holy Cross. After this, let the priest read the same Gospel devoutly, and let the patient wear it about his neck, and he shall be cured. The Gospel is, "This goeth not but by prayer and fasting."

"Dr. John Fauceby, physician to Henry the Sixth, pretended to be an adept in the occult sciences, and obtained a commission from that King to discover an universal medicine, called *the elixir of life*, for the cure of all diseases, wounds, and fractures, and for prolonging life, health, and strength of body, and vigour of mind, to the greatest possible extent of time."—*Henry's History of England.*

† Gave. ‡ Remedy.

Full redy had he his Apothecaryes
To sendyn him his droggis and letewaryes
For eche of hem made other for to wynne
Her frenschepe was not nowè to begynne.
Well knew he the old Esculapius
And Dioscordes and eke Rufus
Old Hyppocras, Lylye and Galien
Serapion, Razis, and Avycen
Averois, Damascyen, and Constantyn,
Bernard, and Gadefleun, and Gilbertyn;
Of his diete mesurable was he
For it was none of superfluitye
But of gret nuryschynge and digestible:
In sanguyn* and in perse† he clad was all
Lined with taffata and with sendal‡
And yit he was but esy of dispense
He kepte that he won in pestelence:
For Gold in physik is a cordial
Therefore he loved gold in special.

Nor is the following account of the regular physicians, given some few years earlier, by John of Salisbury, much overcharged, even with regard to the fifteenth century.

"The professors of the theory of medicine are very communicative; they will tell you all they know, and, perhaps, out of their great kindness, a little more. From them you may learn the nature of all things, the causes of sickness and health, how to banish the one and to preserve the other. They will describe to you minutely, the origin, the beginning, the progress, and the cure of all diseases. In a word, when I hear them harangue, I am charmed. I think them not inferior to Mercury or Esculapius, and almost persuade myself they can raise the dead. There is only one thing that makes me hesitate. Their theories are as directly opposite to one another as light and darkness. When I reflect on this, I am a little staggered. Two contradictory propositions cannot both be true. But what shall I say of the practical physicians? I say nothing amiss of them. It pleaseth God, for the punishment of my sins, to suffer me to fall too frequently into their hands. They must be soothed, not exasperated. That I may not be treated roughly in my next illness, I dare hardly allow myself to think in secret, what others speak aloud." In another work, this writer picks up more courage, and speaks his mind of the practical physicians with equal freedom. "They soon return from college, full of flimsy theories, to practice what they have learned. Galen and Hippocrates are continually in their mouths. They speak aphorisms on every subject, and make their hearers stare at their long, unknown, and high-sounding words. The good people believe that they can do any thing, because they pretend to all things. They have only two maxims

* Blood colour. † Bluish grey. ‡ A fine silken stuff.

which they never violate; never mind the poor, never refuse money from the rich."

In the fourteenth century, John Ardern lived, of whose general information and experience, Dr. Friend speaks in higher terms than is usual with him, of the practitioners of that age. Yet even he exhibited great empiricism and superstition, (we speak on the authority of Friend,) and was equally careful with his predecessors, of the lucre of his profession. "One thing we may remark, (says the author last mentioned,) that he is very careful in making a good bargain, and puts in a caveat, as the translator expresses it, to take for your cure as much as you can, with good assurance for your money when you have done. And the same caution he gives in other cases as well as in this, and no doubt this was the motion in those times."

While, then, such was the state of degradation into which the medical profession had sunk, even among those who might be called the regular practitioners, while empiricism and superstition prevailed, and the most sordid love of money was a ruling principle, we cannot wonder that Charlatans of the lowest description should have abounded in the land. Nay, the reason given by a quack, at a later period, for practising, was the necessity of affording medical assistance to the poor, at a lower rate than they could procure it from learned and skilful physicians. Accordingly, in the first act of Henry the Eighth, entitled "An act for the appointing of Physicians and Surgeons," the preamble states;

"Forasmuch as the science and cunning of physick and surgery (to the perfect knowledge whereof be requisite both great learning and ripe experience,) is daily within this realm exercised by a great multitude of ignorant persons, of whom the greater part have no manner of insight in the same, nor in any other kind of learning; some, also, can no letters on the book, so far forth, that common artificers, as smiths, weavers, and women, boldly and accustomably, take upon them great cures, and things of great difficulty; in the which they partly use sorcery and witchcraft; partly apply such medicines unto the disease as be very noxious, and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction, of many of the King's liege people; be it therefore," &c.

This act merely gave power to the Bishop of London, or Dean of St. Paul's, to license persons for practice, after examination by four physicians or surgeons, selected by the Bishop or Dean for that purpose. It has been called the least objectionable of all those which have been passed for the regulation of the medical profession, but upon what grounds, it is difficult to understand. For it gives the selection of the examiner to individuals unacquainted with the very rudiments of medicine, and how little they could be entrusted with such a duty, we may well conceive, when in the next century, we find such men as Lord Burleigh and Sir

Francis Walsingham, interceding with the College of Physicians in behalf of the most audacious quacks that ever imposed upon the world. This act was passed in the year 1511.

Somewhat earlier than this period, Dr. Thomas Linacre had settled in London, and, by his abilities and his acquirements, had obtained great reputation and influence. Sprung from an ancient and respectable family, deeply imbued with classical learning, the intimate friend of Politian, Erasmus, and Sir Thomas More; the tutor of Prince Arthur, and of Catherine of Arragon; and successively the physician to Henry VII. Henry VIII. and the Princess Mary. He employed his influence in behalf of that profession of which he was so great an ornament. With Henry VIII. he appears to have been on the most familiar terms. Sir Thomas More, in a letter to Erasmus, represents Linacre as speaking eloquently and urgently to the King, while at supper, in behalf of Erasmus himself, while the manner in which Henry answered was such, as to impress upon the bystanders the conviction, that he would, ere long, bestow some noble gift upon the scholar of Rotterdam. This great man seems to have been well aware, of the influence which associations of learned men (since his time carried to so great an extent,) must have upon science, and that a superintending body of medical examiners must tend to raise the qualifications of medical practitioners. In his plan, however, there was this superiority over that of the preceding act. Instead of leaving the selection of the examiners to chance, a permanent association was formed; thus insuring more uniformity in the mode of examination, and that intercourse among the leading members of the profession, which has always been found so conducive to the advancement of knowledge. In the tenth year of Henry VIII. (A. D. 1519,) letters patent were granted to John Chamber, Thomas Linacre, Fernandus de Victoria, Physicians to the King; to Nicholas Halswell, John Fraunces, and Robert Gasley, and all other men of the same faculty in the city of London, and seven miles about, forming them into one body and perpetual comminalty of fellowship of the faculty of physick, and permitting them to have perpetual succession and common seal, and to chose yearly a president of the same fellowship and commonaltye to oversee, rule, and govern the said fellowship, etc.

By these letters, which were also confirmed by Act of Parliament, four years after, no one was permitted to practice within London, or seven miles thereof, without the licence of the college, and five pounds penalty was inflicted for every month, if any one should so practice. Four physicians also were to be chosen yearly to govern the rest. "Quatuor singulis annis per ipsos eligantur, qui habeant supervisum et scrutinium, correctionem et gubernationem omnium et singulorum dictæ civitatis medicorum utentium facultate medicinæ, etc. It has been contested that this act gives no power to examine the graduates of Oxford or Cambridge, but it is to be remarked that no exception was made in

their favour. The words of the letters patent are very precise, "quod nemo in dictâ civitate aut per septem miliaria in circuitu ejusdem exerceat dictam facultaten; that *no one* within the said city, or seven miles thereof, should practice the said profession," unless, etc. and the opinion of Lord Chief Justice Coke, in the case of Dr. Bonham, also confirms this interpretation. The clause prohibiting the practising of Physick, (says the Learned Lord,) doth comprehend four certainties. 1. Certainty of the thing prohibited, sc. the practise of physick. 2. Certainty of the time; sc. practice for one month. 3. Certainty of penalty, sc. £5. 4. Certainty of distribution, sc. one moiety to the King and the other moiety to the college; and this penalty, he who practiseth in London, doth incur, although he practise and use physick well, and for the body of man.

In the act of the 15th Henry VIII. confirming this charter, the six persons before named as principals, were increased to eight, and were ordered to be called elects; the president was annually to be chosen from these elects, "and as often as any of the rooms and places of the same elects shall fortune to be void by death or otherwise, then the survivours of the said elects, within forty days next after the death of them, or any of them," were to "chose, name, and admit, one or more, as need shall require, of the most cunning and expert men of and in the said faculty of London, to supply the said room and number of eight persons, so that he or they, that shall be so chosen, be first, by the said supervisors, straitly examined, after a form devised by the said elects, and also by the same supervisors approved." The same act also extends the power of the College to the whole of England, prohibiting all except graduates of Oxford and Cambridge, from practising, without letters testimonial from the president and three elects "of their approveing and examination, but inflicting no penalty." The first president of the college of physicians, was Dr. Thomas Linacre, whom we have already referred to as the founder of the institution. This great man did not, however, long survive the establishment of his college. He had raised the character of English physicians; he had employed the influence which his learning, his abilities, and his reputation conferred upon him, to improve the practice of medicine among his countrymen; and he completed the obligations, by leaving at his death, "his house in Knight's Rider-street, for a college, and his library." This is not the place to enter into the biography of Linacre, yet we feel too much indebted to him to pass his name over with merely a cursory notice. For several years before his death, he had been much afflicted with stone; yet he still continued his literary labours. At length, however, worn out and exhausted by this torturing disease, he died in London, on the 20th of October, 1524.

It was not, however, merely by establishing the college of Physicians, that Linacre contributed to the progress of medical science. Till his time, the Arabian physicians had been the

principal sources of medical information, whose chief merit it was, to add to the catalogue of the materia medica. Astrology, also, was lending its aid to the degradation of medicine, and the simple observations of the Greek physicians, valuable, from the unpretending accuracy with which they were drawn up, were either little known, or came deformed, through the miserable translations of the Arabians. But Linacre had had a classical education; he was deeply versed in all the grammatical niceties of Greek and Roman literature, and consequently well able to read and to appreciate the worth of those authors who had written upon medicine. It cannot, then, be surprising, that he should translate some of the works of Galen, as the best offering which he could make upon the altar of science. We look back now with affected or real contempt upon the classical patriarchs of medicine, but in doing so, we do but expose our ignorance and our ingratitude. Many and dark ages had intervened since the time of Galen to that of Linacre; for simple investigation, groundless theories or superstitious devices had been substituted; the true and only effectual mode of cultivating medicine, had been neglected. Physiology had scarcely even a name. Now Galen's works were a storehouse of all that was known at the period when he wrote; he himself had experimented largely and ingeniously; many of his experiments have been repeated, and the repetition has only confirmed their correctness. To render such an author more generally accessible, was then the object of Linacre, and the manner in which he executed his intention, may be best given in the language of Erasmus. "Mitto tibi libros Galeni," says this celebrated scholar, in one of his epistles, "operâ Linacri melius Latinè loquentes, quam antea Græcè loquebantur." "I send to you the works of Galen, now speaking better in the language of Rome, than they formerly did in the language of Greece." Latin was then the universal language; the world of science, widely but thinly scattered, conversed in the Roman tongue from one end of Christendom to the other; while Greek was scarcely either cultivated or known. By this undertaking of Linacre, the medical profession were enabled at once to start forward in their course; and they began where their only scientific predecessors had terminated. It was vain to look among the Arabians for physiological investigations or rational theories, but the literature of Greece was abounding in both. Had not, therefore, the cultivators of medicine been thus furnished by the Grecian and Roman writers, they would have had to retrace the ground which had been already trodden, and would have found that, a wild and unknown region, where discoveries of the highest value had already been made. In this manner, then, many centuries of painful investigation were saved to mankind, and the praise of having conduced to this, is to be ascribed, in no small degree, to the founder of the college of physicians.

In the thirty-second year of Henry VIII. (1540,) an act was passed, discharging physicians from keeping watch and ward in

the city of London, and in the suburbs thereof, and from serving the office of constable, etc. The same act empowers the college to choose four physicians yearly, "who as often as they shall think meet and convenient, may enter into the house or houses of all and every apothecary, * * * * * to search, view, etc. the apothecaries' doses, drugs and stuffs, and to cause to be burnt and destroyed the same as they shall think meet by their discretion, etc. and if the said apothecaries * * * do obstinately refuse or deny the said persons to enter their houses, every one of them so offending shall forfeit five pounds, one half to the King, and the other to the informer. This act, also, is deserving of notice, as claiming the practice of surgery as a part of the science of physick. "Forasmuch," are the words of the act, "as the science of physick doth comprehend, include and contain, the knowledge of surgery, as a special member and part thereof; therefore be it enacted, that any of the said Company or Fellowship of Physicians, being able, chosen, and admitted by the said president and Fellowship of Physicians, may, from time to time, as well within the city of London, as elsewhere within this realm, practise and exercise the said science of physick, in all and every his members and parts, any act, statute or provision, made to the contrary notwithstanding." This clause, we suspect, may be regarded as nothing more than a reservation of rights, but that it was not much acted upon, may be concluded from the fact, that surgeons had long existed as a separate body. Indeed, the more or less complete separation of medicine and surgery has existed in every society, in which civilization has made much progress. At the beginning of the last century, a long contest took place on the subject of this division, between Dr. Mead, who maintained, and Dr. Conyers Middelton, who denied, that in Classical Rome any arrangement existed like that which now prevails. There were, however, different terms, according to the department which each occupied, as "Medicus vulnerarius, medicus ocularius, medicus auricularius;" and Celsus, in the preface to the sixth book, has taken some pains to describe both the qualifications and duties of a surgeon, which he would scarcely have done, had not surgery been regarded as a distinct branch of the medical art, and more or less separated in practice. To return, however, to the history of the college.

They must know little of human nature, who imagine that any institution like the College of Physicians, can be directly effectual in destroying quackery. Its influence will, indeed, be felt in increasing the number of educated men; in raising the character of the art, and the morality of its legitimate professors. But the desperation of patients will still make them rush upon desperate measures. Given over by the respectable practitioner, they seek relief from the impudent empiric, and the bold pretender to impossible cures. And even among those who are in health, some will still be found to delight in their own delusion, who will repose confidence only in the men who studiously deceive them,

and who cannot believe that in the simple and generous carriage of an upright physician, any good thing can dwell. We cannot, then, be surprised that with the increasing wealth of England, empirics of every kind should have abounded; they were as naturally the produce of its wealth, as the increased vigour of weeds is the consequence of a rich and fertile soil. The corn, indeed, grows up, but woefully intermingled with tares.

We have not many records left, of the manner in which the College exercised its powers during the reigns of Henry VIII. and Edward VI. nor yet of Queen Mary; and we may reasonably conclude, therefore, that its proceedings were conducted with great discretion. Nevertheless, many practitioners were called before them, and rejected, and several corrupted drugs and medicines were burnt by order of the censors. Dr. Goodall has given us the following account of the manner in which one of the pretenders, who then were so plentiful, was treated in the reign of Edward VI. We extract it as a fair specimen of the genius of quacks then prevalent. They had not yet arrived at such a state of refinement, as to have their St. John Longs, nor their watering place Charlatans.

"In the fourth year of this king's reign, in the month of September, one Grig, a poulterer, of Surrey, (taken among the people for a prophet, in curing of divers diseases by words and prayers, and saying he would take no money, etc.) was, by command of the Earl of Warwick, and others of the council, set on a scaffold, in the town of Croydon, in Surrey, with a paper on his breast, wherein was written his deceitful and hypocritical dealings; and after that, on the eighth of September, set on a pillory at Southwark, being then our Lady fair there kept; and the mayor of London, with his brethren the aldermen, riding through the fair, the said Grig asked them and all the citizens forgiveness."

"Of the like counterfeit physician, (saith Stow,) have I noted, in the summary of my chronicles, anno 1582, to be set on horseback, his face to the horse tail, the same tail in his hand as a bridle, a collar of Jordans about his neck, a whetstone on his breast, and so led through the city of London, with ringing of basons, and banished.

In Queen Mary's reign, after confirming the act of the 14th of Henry VIII. additional powers were granted to the College, "for the better reformation of divers enormities happening to the common wealth, by the evil using and undue administration of physick," etc. These powers enabled the president to commit all offenders and transgressors against the act of Henry VIII. to any ward, gaol, or prison, within the same city and precincts, the tower of London excepted.

The college interpreted the words of this act as enabling them to imprison not merely their own members for any transgressions, but all persons who practised medicine without their license; and it is singular that this interpretation was not disputed till the

reign of James I. when Lord Chief Justice Coke decided, in the case of Dr. Bonham, that the "censors have not power by the letters patent and the act, to fine and imprison any for practising of physick within London, but only pro delictis suis in non bene exequendo, etc. for ill and not good use and practice of physick." In Queen Mary's reign, however, they imprisoned one Charles Comet, who was patronized by Hugh Weston, then Dean of Westminster, and Roger Chamley. So certainly will empirics in every age, find patrons in every class of society. The college also were very attentive to their trust in exerting what influence they possessed over the whole of England, as well as in the city of London; and under the judgment of Serjeants Rastal and Walpole, and Sir Robert Brook, Lord Chief Justice of the Common Pleas, they sent a letter to the justices, etc. throughout England, calling upon them to assist in the discovery and punishment of the empirics, resident or wandering, in the several towns and counties of the kingdom. At the same time, they appointed visitors, "to whom they granted authority in their names, that they should not suffer any to practice physick throughout England, unless such as had taken their degrees in Oxford or Cambridge without grace; or were licensed by them, or the college, under their public seals. All others were obliged to enter into recognizance that they would not practice till they had been examined and approved by the college and elects of the college under their hands and seals Such as did refuse to give obedience to these laws, were, by the justices, mayors, and other officers, committed to prison till they submitted to the due execution of them."

Dr. Goodall also mentions, that surgeons and apothecaries were prohibited in this reign, from prescribing in medical cases, and the latter were required not to divulge the names of medicines, nor to deliver physicians' prescriptions to patients. We know not, however, by what authority this was done; probably, however, by the college itself, under the power of the charter.

Among the persons of eminence who were members of the college in this reign, Drs. Beetle, Owen, Hays and Caius, deserve, perhaps, more particular notice. The first is well known as the friend of Cranmer, and is introduced by Shakespeare in the play of Henry VIII. in which the poet only dramatized what actually occurred. To Drs. Owen and Hays, the college of physicians is under considerable obligations. It must have been manifest that, without some clear understanding between the universities and the college, disputes would very likely arise between the two bodies; and accordingly, in Queen Mary's reign, some misunderstanding did occur, from the university of Oxford having given a degree in physick to an illiterate person, who was afterwards rejected by the college. On this occasion, the latter appealed to Cardinal Pole, then Chancellor of the University, who so arranged, "that Oxford was obliged to consult Dr. Owen and Dr. Hays" respecting the manner in which medi-

cal degrees should be granted. Which being agreed upon, the statute was afterwards confirmed by the Cardinal.

Dr. Caius is well known both as an author, and as having been very earnest in defending the privileges of the college. To him it was chiefly owing, that the dispute between the surgeons and the physicians was decided in favour of the latter. The surgeons had thus early begun to invade the province of the physician, and had assumed the right of administering internal medicines in sciatica, in the venereal disease, and any kind of ulcer or wound; and they appear to have had powerful friends. The cause came on in the Lord Mayor's Court, in the year 1572, when, according to Dr. Goodall, the Bishop of London and the Master of the Rolls, argued on the behalf of the surgeons; and Dr. Cairns, then president of the college, appeared for the physicians; the result was in favour of the latter, the Queen's commissioners unanimously agreeing that it was unlawful for the surgeons to practice in the above cases.

This last transaction occurred in the reign of Elizabeth, and so far, we have rather anticipated the course of events. At this period, the college appears to have exerted itself with great activity against the pretenders to medicine; nor does it seem to have been influenced by any but the most upright motives. Its power of fining and imprisoning was in no manner questioned during this reign, and Dr. Goodall has related many examples in which it was exercised. The circumstance, however, upon which we are most inclined to dwell, is the independent manner in which the college acted, towards the ministers of Elizabeth. It was not then as now, a safe matter to refuse a minister a favour, nor could those who acted independently, expect support from the people. The crown now powerless, was then despotic, and they who could venture to resist its influence, must have had higher motives of action, than is necessary for the vain boasters of freedom from court patronage, in these days. The following letter from Sir Francis Walsingham, is a good illustration of the manner in which great men then treated all below them.

"After my very hearty commendations unto you, whereas, heretofore by her Majestie's commandment, upon the pitiful complaint of Margaret Kennia, I wrote unto Dr. Symondes, then president of your college and fellowship of physicians within the city, signifying how that it was her highness pleasure that the poor woman should be permitted by you, quietly to practise and minister to the curing of diseases and wounds, by the means of certain simples, in the applying whereof, it seemeth God hath given her an especial knowledge, to the benefit of the poorer sorts, and chiefly for the better maintenance of her impotent husband and charge of family, who wholly depend of the exercise of her skill. Forasmuch as now I am informed, she is restrained either by you or some of your college, contrary to her Majestie's pleasure, to practise any longer her said manner of ministering simples, as she hath done, whereby her undoing is likely to

ensue, unless she may be permitted to use her knowledge in that behalf. I shall therefore desire you forthwith to take order amongst yourselves for the re-admitting of her into the quiet exercise of her small talent, lest by the renewing of her complaint to her Majesty through your hard dealing towards her, you procure further inconvenience thereby to yourself, than perhaps you would be willing to fall out. Whereas contrariwise it will be well taken, that you afford her the like favour she hath found at the hands of your predecessor. And so not doubting, etc.

FRA. WALSINGHAM.

The answer of the college is too long to insert entire, but it was worthy of men of high feelings and of liberal education. It is, indeed, marked with the humble manner with which great men were then approached, but it steadily refuses obedience to the request, or rather the command, which had been issued. The college first stating the incapacity of Margaret Kennia, "the strait hand of our oath and conscience, which we esteem of greater weight than we can release ourselves therein, will procure your honour to enter into a more favourable conditions of our doings herein," etc. at length conclude with the following sentence:—

"And therefore being in good hope, that your honour will nothing mislike for seeking lawful and direct means to resist such dangerous disaster as by other means we cannot redress; and professing ourselves to be most willing and content to abide any inconvenience whatsoever may ensue, rather than be brought to allow of so disorderly an attempt either in her or any other her lyke, and therewithall most humbly beseeching you, that as most excellent virtues and learning hath made you famous to the world and posterity, so it might please you to be a favourable patron to such as have been trained and brought up therein. We most dutifully take our leave," etc.

Sir Francis Walsingham, though one of the most sagacious men of the day, appears to have had a peculiar inclination to empirics, and on several occasions interfered in their behalf. At no time, however, did the college betray its trust from deference either to him or to other great men, but in whatever it granted at their request, it still was careful to protect the public. Thus when the secretary applied on behalf of one Nott, the college were willing to remit his fines, on condition of his giving his own bond not to practice, which, for a while, he refused, but afterwards acceded to, and was released. Nevertheless, this man repeatedly became the subject of prosecution, what he acquired from the credulity of the people, far outweighing, probably, the loss and inconvenience arising from fines and imprisonment. The good effect of the conduct of the college is, however, visible in a communication with Sir Francis Walsingham himself. He had again applied on account of one Paul Buck, who was then detained in prison by the college, and a deputation, consisting

of the president and Dr. James, waited upon him with an answer, justifying its conduct towards Buck, and requesting Sir Francis to leave them discretion and liberty in the exercise of their own powers. To this Sir Francis replied, "That he would never act anything against the benefit or dignity of the society, and if at any time by the importunity of friends, he did write upon such an occasion, he notwithstanding left them to act what they thought most prudent." Buck, however, still sought support from the great, and in the year 1593, he obtained a letter from the Lord High Admiral, Charles Howard, son of the first Lord Effingham, and himself afterwards created Earl of Nottingham. This letter is curious, as containing an offer of a bribe to the college of twenty pounds fine, and twenty shillings a year for a license to practice. Neither this application, nor others from the too celebrated and unfortunate Earl of Essex, etc. were successful, the college still refusing their license to "one only trained in mechanical matters, and by profession and whole course of his life, a mere goldsmith."

"In the year 1595, we again find the college at issue with the surgeons, to whom they sent a letter, admonishing them to abstain wholly from the practise of physick. In this letter it is stated that, although many of the surgeons had offended in this respect, yet the college had for the most part hitherto forborne either to punish or molest. But that offenders had increased, from the lenity of the college, "insomuch," continues the admonition, "that both in credit and otherwise, it seemeth to touch us more near than can well be indured." The word "otherwise" refers, we imagine, to the pecuniary loss which must naturally be the consequence of such interference. Yet even this notice, degrading as it is, is an important improvement both in manner and spirit, over those physicians whom John of Salisbury mentions as never minding the poor, and never refusing money from the rich: and, indeed, throughout, it is in this gradual improvement, that we discover the value of the college. Nor was this confined simply to the members themselves. It was evidently impossible for ignorant men to contend successfully with this body; neither could the college expect to be victorious over opponents, as well informed as its own members. It is thus, therefore, we find that in the earlier period of its history, all its proceedings were successful, no one could withstand its prosecutions. But in process of time, a new race of men arose, against whom the attacks of the college often failed. Nor was this in every case just, for frequently much ignorance existed in those who exercised a successful defiance, yet so mingled with information, that it would be sometimes difficult to decide which most predominated. So long as the ignorance was clear, and could be manifested easily to the world, the college was secure in the support of the public, without which no statute, however wholesome, can ever be effective. But, as this ignorance became less clear, as often much shrewdness was exhibited by the illegal practitioners of medicine, the public were apt to think that the

college less consulted the general welfare, than its own emoluments, and it lost all support from the people.

These remarks are perhaps somewhat premature, but we have been induced to make them in reference to this contest of the college with the surgeons. Jenkins, one of the objects of prosecution, a surgeon by profession, was "charged with selling of one sort of drink to all that came for it;" and Read, who was accused with him, being examined, and having himself chosen diarrhœa as the subject, "*told the college that it was a flux of the womb, proceeding from gross humours in the stomach.*" Both these men having been committed to prison by the president and censors, were brought before Sir Home Popham, upon a writ of Habeas Corpus. Jenkins defended his practice of physick because he was a surgeon, in which "the use of inward remedies is often necessary;" and Read defended himself by a statute of Henry VIII. "by which it was lawful for any person having the knowledge of herbs, to practise at least in some diseases." This statute, however, evidently referred to outward diseases only, and it is worthy of reference, as shewing what the state of surgery must have been at the time it was passed; only fifty-three years before these proceedings against Read and Jenkins were instituted. "For," are the words of the act, "although the most part of the persons of the said craft of surgeons have small cunning, yet they will take great sums of money, and do little therefore, and by reason thereof, they do oftimes impair and hurt their patients rather than do them good. In consideration whereof, etc. Sir Home Popham decided in favour of the college, and the following summary of his opinion is given by Goodall.

1. There is no sufficient license without the college seal.
2. No surgeon, as a surgeon, may practise physick, no, not for any disease, though it be the great pox.
3. That the authority of the college is strong and sufficient to commit to prison.
4. That the censure of the college rising from lesser mulcts to greater, was equal and reasonable.
5. That it were fit to set to physicians' bills, the day of the month and the patient's name.
6. That the Lord Chief Justice cannot bail or deliver the college prisoners.
7. That a freeman of London may lawfully be imprisoned by the college.
8. That no man, though never so learned a physician or doctor, may practise in London, or within seven miles, without the college license.

Armed with these powers, the college proceeded very actively against all who dared to practise without their license, and the consequence must be very obvious. Many who, without the fear of this interference, would have contented themselves with a very moderate stock of information, and have practised medicine with

very slender qualifications, submitted themselves for examination at the college. For this examination, much previous study was necessary, and hence soon arose a higher standard of medical attainments. That this was the natural result of the course which the college pursued, must, we think, be allowed even by those who may be most hostile to the institution in its present state; and it is but fair to believe, that such a result was anticipated by the members themselves. That they neither did nor could anticipate, that the increase of knowledge would require some changes in their own body, if it was to retain its influence, and would raise up opponents, against whom they could not, as heretofore, contend successfully, cannot be a matter of surprise, and still less of reproach. Such, however, was unquestionably the fact, and even in the reign of James I. we find the college somewhat impaired in power. The history of the institution at that period, we leave to a future number, only now requesting our readers to remember the state in which the college found the science of medicine, and the state in which, even at the end of Elizabeth's reign, it was left, having had among its members within a few years, Caius, Caldwall,* and Goulston, distinguished not only for their attainments, but their anxious endeavours to promote the science which they adorned; and in the year following, the death of the Maiden Queen, numbering Harvey among its candidates, than whom no greater name can be mentioned in medicine. Surely the credit of such men is, in some degree, due to the college of which they were members; it afforded honours which could stimulate the ambitious, and coercion to restrain the shameless; it gave a local habitation, and an honourable name, to a profession which had previously been the common resort of incorrigible ignorance and impudent pretension; and so far, therefore, it must be allowed to have fulfilled the intention of its establishment.

J. D.

* "Dr. Caldwall, with the Lord Lumley, in the 24th year of Queen Elizabeth's reign, procured her Majesty's leave, under the broad seal, to found a surgery lecture in the college, and to endow it with forty pounds per annum, which is laid as a rent charge upon the lands of the Lord Lumley and Dr. Caldwall, and their heirs for ever."

ARTICLE II.

Some Observations on the Use of MERCURY, *in Acute, as well as Chronic Affections.*

BY J. K. WALKER, M. D., HUDDERSFIELD.

BUT a few years ago, there were few practitioners in this country, that did not consider blood-letting, in all inflammations of the abdominal viscera, not only as the sine qua non, but almost unicum remedium, on all occasions. The exhibition of mercury in any form, with the exception of aperient doses of calomel, was restricted to cases of chronic inflammation. Latterly, however, the aid of mercury has been called in, in acute affections as well as chronic, but more especially when the seat of the inflammation is within the abdomen; and experience has shewn that, as on the one hand, a judicious recourse to the lancet, renders the system more obedient to the mercurial action, so on the other, the skilful employment of this mineral, often supersedes the necessity of a too frequent appeal to the lancet. Like faithful allies, they give and receive assistance in combating the ravages of acute disease, and, by their alliance, contribute mutually to spare each other. If we may credit the pages of our medical periodicals, this happy innovation on ancient practices, has been fraught with the most salutary consequences, and the lives of many, that might have been sacrificed to reiterated bleedings, have been spared, by the opportune employment of this powerful mineral. I fear we must be content with the knowledge of this fact, without pretending to any satisfactory explanation. The modus operandi of this, as well as of many other agents in our art, is still buried amongst the arcana of physic. It is enough for us to know that in inflammation, most, if not all the secretions, are impeded or vitiated, and that the remedy that will restore them to a healthy state, whether from the liver, the skin, or the bowels, is one of those upon which the practitioner can build his best hopes of arresting the inflammatory attack. But, without further speculation on the way mercury co-operates with the lancet, in subduing visceral inflammation, I have transmitted for insertion in your columns, some instances which lately occurred to me, of the successful combination of the two; in the hope, not of presenting new facts, so much as of claiming their due importance to facts already known. For sure I am, that medical men still too exclusively trust to sanguineous depletion in abdominal inflammation, to the neglect of other powerful agents, and that a degree of exhaustion has been brought on, needlessly, from which the patient has never been able to rally. The propriety and priority of decisive vascular depletion, above all other means, in acute inflammation, no man can doubt; but this done, no time should be lost in the use of mercury, *along with the usual* treat-

ment, according to the particular circumstances of the case. In many instances, the stomach will not bear liquids of any sort; in this case, frequently repeated doses of calomel, in such quantities as the stomach will bear, especially if combined with opium, seem best calculated to allay whatever depends on spasm and irritation, and usually so far from stopping the operation of the purgative, they ensure a more copious fœcal evacuation. This, in fact, is the ordinary plan of treatment; and is it not a general rule, with rare exceptions, that where the use of the mercury is carried far enough, the period of mercurial action on the mouth is that at which the worst symptoms date their decline? Do not dissections prove, that very considerable inflammation in the peritoneum, e. g. and accompanied with great pain, may exist, and yet produce no febrile movement in the sanguiferous system? Should a doubt exist as to the real nature of the complaint, what safer plan can the practitioner adopt, than a combination of a modified depletion, with mercurial impregnation of the system? I find cases recorded of acute peritonitis simulating spasmodic colic, which were treated as such, and terminated fatally, but which, under the plan I am now advocating, would probably have had a very different issue, at least, so the morbid appearances would lead one to suspect. We have no certain criterion to mark the transition from functional to structural disease. Do not cases occasionally occur, where, from the unpromising symptoms, any one would predicate a fatal tendency, and yet the patient rallies and recovers. Such was the case with a patient whom I attended but a few weeks back, along with Mr. Astin, surgeon, of this place, where, from the symptoms, we had reason to apprehend the most unfavourable result, until the system was put under the influence of mercury. It was the case of a lady, æt. 45, labouring under the symptoms of acute peritonitis, with exquisite pain, on pressure, and general enlargement of the abdomen. Pulse 130. She could not lie in any other position than on the back, and was afraid of moving, on account of the pain brought on by motion. The bowels were costive, and the sickness troublesome. She was bled to syncope, and opening medicine administered every two hours, till the bowels were moved. On the following day, as the pain and tenderness were but partially relieved, leeches were applied to the abdomen, and subsequently a blister; and at the same time, the *addition of mercurials* to the salines in ordinary use. The symptoms, however, were now worse, and on the following day, the abdominal distension and pain were increased, and the nausea and vomiting incessant, with singultus at intervals. She was again bled, and half a drachm of unguentem hydrargyri rubbed in, every three hours, and the blistered part dressed with the same; in other respects, the ordinary remedies of saline aperients, and occasional enemata to keep the bowels regular, with the use of anodynes at bed time, formed the basis of the treatment. In twenty-four hours, from the use of the inunction, the abdomen was neither so

large nor so tender, though the hiccough and sickness were still distressing. Three entire days (during which there was little intermission in this treatment,) elapsed before the mercurial halitus was perceptible, but the abdomen was, from that time, less sensible to the touch, and more diminished in size. In short, as soon as the mouth and fauces were severely affected with the mercury, the bad symptoms gradually receded. We had many reasons in this case for apprehending the worst result, for *after* the vigorous depletion resorted to, there was no change for the better, but the hiccough and sickness grew worse. It was only when the system yielded to the influence of a new action, that former symptoms gave way, and the probability is, that neither the lancet nor the mercury could have alone succeeded, but that the former disposed the system for the action of the latter, thus establishing a new train of symptoms, which eventually expelled the old ones.

It is in my power to enumerate several such cases of decided relief, from a timely resort to this plan of treatment, in acute abdominal diseases, admitted during the last year into the dispensary of this town. As the measures pursued in all these instances are so similar, a recital of one of them will perhaps be sufficient.

Harriet Swallow, æt. 21, was first seized in July last, with acute pain, diffused all over the abdomen, but greatest in the ileocœcal region. There was the usual febrile developement, quick and hard pulse, constant nausea, and bowels obstinately costive. Bleeding both general and local was resorted to, and after the leeches, a blister. These and other measures had been tried, without any removal of the pain and tenderness of the abdomen, at the period I saw her, when the pulse was still hard as well as quick. Skin hot and dry; tongue parched; and sickness as well as obstipation unrelieved. She was again bled to syncope, and 20 leeches applied to that part of the abdomen where the pain was the greatest. Along with these, however, I ordered two grains of calomel every two hours, and a drachm of the unguent hydrargyri, to be rubbed in, twice a day. She had, also, a succession of blisters on the abdomen, each dressed with the mercurial ointment. She continued several days without any apparent amendment, except that the bowels were acted upon slightly by the calomel, and the turpentine enemata. But, *as soon as the mouth was affected*, the pain and other symptoms gradually gave way; the pulse became fuller and less quick; skin moist, and bowels obedient to the action of aperients. In proportion, however, as the mercurial action in the mouth subsided, *the pain, on pressure, again returned*, and was again relieved by a similar plan. But a space of two months elapsed, before she could bear pressure without *any* pain. She was dismissed cured, after this period, and I understand from Mr. Bambridge, our house apothecary, who watched this case with great attention, that she has not had any return of her symptoms.

I have selected this, as well as the following case, for insertion, because I wish to draw attention to the frequent occurrence of disease in that part of the colon, where the valve is situated, an occurrence which is often overlooked, or *mistaken for some other* affection. The important function this valve has to perform, renders it very liable to disease from distention, irritation, and other causes, which terminate in enlargement, or produce extensive inflammation in the adjacent parts.

A case of a similar kind occurred to Mr. Greenwood, surgeon, of this place, and was eventually relieved by this mixed system of treatment, though the patient was a stout muscular man, æt. 46, and in other respects no unfit subject of vigorous depletion. He had for several days been subject to costiveness and uneasy sensations in the abdomen, but on the 9th of April, the pain suddenly became violent, and was followed by a uniformly diffused tension and tenderness of the abdomen. The greatest pain, however, was always felt *over the ileocæcal region*, which appeared to be the source and centre from which the other symptoms emanated. Pulse 120, sharp, and wiry in its feel; tongue loaded thickly with a white fur; skin hot and dry; troublesome nausea and vomiting, and bowels costive. He was, in the first instance, bled in the arm to syncope, and twelve leeches applied over the ileocœcal region, and at the same time, two grains of calomel were ordered to be taken every two hours, and the bowels were acted upon by the cathartic mixture.

10th.—A very copious discharge of very offensive stools. Pulse 116; the tenderness of the abdomen unrelieved, and the vomiting still troublesome; complains of great pain in the right testicle, but no uneasiness in the lumbar region. The bleeding, both general and local, was repeated, and the calomel, with a saline in a state of effervescence, was repeated as before, every two hours.

11th.—Pulse 120; pain still great, *but particularly over the right iliac region;* the testicle still tender, and appears a little enlarged. Rep. hirudines, et app. empl. lyttæ abdomini, ubi dolor maximus est.

12th.—The blister has risen well, but has not given relief to the pain. Pulse 112; vomiting less, and the bowels open. Rep. calm. etc, ut antea.

13th.—Pain a little relieved; slight tenderness of the gums; no vomiting; bowels regular. Rep. calomel ut antea.

14th.—The mouth is this day very sore, and is the principal complaint he makes, as the original pain is nearly gone. Pulse 96; bowels regular, and he had some sleep. Omitt. calomel. Continuetur mist salina.

15th.—The symptoms now are all relieved, and as the mouth is a source of so much distress to him, he was ordered a gargle with the chloride of lime, and from this day his improvement was rapid, without the least return of pain, or other unpleasant symptom.

During the last winter, among the admissions to the dispensary of this town, there was no species of disease more frequent than diseases of the digestive tubes, which put on various aspects. In a great majority of these cases where diarrhœa existed, it was usually complicated with dysenteric symptoms, and where this was not the case, there were yet evident marks of phlegmasiæ. In some we had reason to suspect an erythematous state of some portion of the mucous membrane of the intestines. The pain was felt in the upper as well as lower part of the abdomen, so as to justify the presumption that the small, as well large intestines, were the seat of disease. Some of these cases proved fatal after the most careful treatment, but in the most severe cases, we had often the gratification to observe a gradual cessation of all the the symptoms, *synchronous with the action of the mercury on the mouth*, and this fact, which must have occurred to almost every practitioner, should operate as a strong reason for the early adoption of this plan of treatment; especially in intestinal affections, when the degree of pain or other symptoms are not always the measure of the severity of the affection, and where so many morbid changes are secretly going on, without any specific symptoms to warn us of their existence. Mischief may exist, even to an incurable amount, and yet there shall be a total absence of such symptoms, as might lead the practitioner to a rational conjecture on the subject. If we find pain in the abdomen, a hot skin, and a frequent pulse, with slimy or bloody dejections, we conclude that some portion of the intestine, at least, is the seat of more or less inflammation; but how often do we observe a total freedom from pain, in cases where numerous ulcerations cover the internal surface of the intestines! Do not intestinal tubercles often arise without any pain to indicate their presence? The same may be said of various organic changes. We are often at a loss to distinguish between mere functional derangement, and the consequences of diseased structure. How many have mistaken such functional disturbances for symptoms of organic mischief? Which of us is able to ascertain, the precise period, when morbid action has led to morbid structure, still less to say what is the degree of structural change that admits of cure, and what only of relief. If, therefore, it can be shewn, that there is a power in mercury, adequate, in many instances, to arrest these insidious affections, to dismiss incipient disorganization, or to retard the tendency to suppuration, effusion, or other morbid change; are we excusable in postponing for a single day, the use of this powerful agent, in the early stage of the phlegmasiæ, as well as at a more advanced period; in acute as well as chronic diseases, and especially where some obscurity hangs about the case?

In fact, I believe that much of that prejudice which operated so unfortunately against this medicine, is now fast wearing away, and it is impossible not to observe, that in most of those fortunate cases of cure, recorded in our periodical publications, the merit

of success is mainly attributable to the employment, internally or externally, of this mineral; of course there are exceptions, which make it inexpedient, occasionally, to resort to this mode of treatment. In certain idiosyncrasies for instance, the use of mercury in any form or quantity, is inimical. We see in some, that the smallest quantity produces, perhaps, irritative fever; in others, it creates great intestinal disorder, or gives a shock to the nervous system. Some constitutions seem insusceptible of the salutary operation of mercury. But the same objection attaches to many of our most valuable therapeutical agents, which, nevertheless, are not on that account discarded from general adoption. It is the misfortune of our art, that we know too little of the modus operandi of the agents we employ. Having found by experience what has proved of service in one class of diseases, we usually deem *that* reason enough for its employment in analogous cases. We may question the mode in which mercury acts on the system; one person may attribute the benefit to a transference of humour to a distant part, the mouth for instance; another may contend, that by creating a vicarious disease of a less dangerous nature, he thereby supersedes the old one, as two morbid actions seldom co-exist without one modifying the other; but no person can doubt, when he observes the cessation of fever, pain, &c. consentaneous with the mercurial action on the gums, that the merit of the change appertains of right to the mercury, whatever other remedies may have preceded it.*

I have said that to certain idiosyncrasies, the use of mercury is singularly obnoxious; in others, there is a disposition to severe ptyalism, and cases not unaccompanied with danger have occurred where the mouth and fauces were violently affected by its use. But how small is the number of such instances, where the patients, as is the case in acute diseases in particular, are prepared, by previous purging, low diet, by the antiphlogistic regimen, and in most instances, by the vigorous use of the lancet; and how much more frequently do we see the permanent bad effects of minute doses of mercurials, taken for weeks and months

* Dr. Bostock states that, from his experiments, the chemical constitution of the mercurialized, is different from that of common saliva, inasmuch as it contains a quantity of *animal* matter, having properties similar to those of albumen in its uncoagulated state, or as it exists in the serum of blood. He detected no mercury in the saliva, from which it would seem, that the effect of this medicine on the salivary glands, must be through the system generally, and that the mucous secreted from other organs, undergoes the same change. Possibly we may form a more correct estimate of its constitutional action, by pursuing these experiments, and examining the chemical nature of the mucous secretions in other parts of the body. We have all observed the changes in the biliary and alvine secretions, especially when they are in a morbid state; and were this its only property, its value would be inestimable, for on a vitiated state of these secretions, there is scarcely a disease, "which the flesh is heir to, that does not occasionally depend."

in succession, and where the mouth was never made sore. How rarely do we find a case of fatal result from the use of mercury, either when given internally or introduced by the skin.

The case recorded by Dr. Crampton, where three drachms of the mercurial ointment rubbed in, (half a drachm twice a day,) produced violent salivation and swelling of the integuments of the face, and subsequent death, can hardly be quoted as a decisive proof of the bad effects of the remedy. Indeed, on the appearance of the saliva, there was every prospect of amendment. It was only on its *sudden* cessation, that symptoms of cerebral congestion followed. Besides, in this case, there was an enlarged and diseased liver, as appeared on dissection; in other parts there was also much structural mischief; 'a *thickening of the dura mater*,' e. g. and in the intestines considerable ulceration, which Dr. Crampton takes for granted to be the consequence of the mercurial inunction, as if ulcerations were not of ordinary occurrence in similar cases where no mercury has been used. As far as this case goes, therefore, it only proves that all cases are not equally favourable to its administration, and that the disease here, had taken too deep root in the system to be eradicated. The disappearance of the dropsy, from other cavities, seems to have superinduced a metastatic kind of apoplexy, and this, and not the mercury, was probably the immediate cause of death.

That so few cases of this kind are recorded, proves the infrequency of its deleterious effects. The general result is beneficial, "exceptio probat regulam," and there are few of our leading remedies that are not amenable to similar objections. It is worthy of observation, however, that while some constitutions are speedily susceptible of the influence of mercury, in others you find that weeks and months will elapse, before any effect on the mouth can be produced, and this difficulty varies in most instances, though not in all, with the intensity of the disease to be overcome; the reluctance in the system to put on a new action, being no bad criterion of the severity of the old one. I may be permitted in this place to offer, as an illustration of this vicarious agency, some account of a case of paraplegia, the consequence of an injury inflicted by a fall, some months before, in the lower lumbar vertebræ. There was, along with the paralytic symptoms, in the lower extremities, a sense of formication and coldness in the arms, and great difficulty of deglutition and coldness in the mouth. The speech, too, was materially affected. The subject of these symptoms, a lady, æt. 45, and the mother of children, had already at the period I saw her, under the direction of Mr. Robinson, surgeon, of this place, submitted to vigorous depletion, and blisters to the part of the spine where the pain was, occasionally, excruciating. The same treatment, with slight modification, was persevered in for nearly two or three months, and the very obstinate costiveness of the bowels, daily relieved by glysters and strong aperient medicines. But neither repeated

cupping, nor the frequent counter-irritation of blisters and the tartar emetic ointment, made the slightest impression on the symptoms. Ascribing, however, as I did, all the symptoms to a concussion of the spinal marrow, I felt that there was no other alternative than to vary the plan of counter-irritation, and with this view two setons were established, one on each side of the lumbar vertebræ. At the same time, about a drachm of mercurial liniment was rubbed in every night, either on the thighs, or the spine itself, in the hope of arresting any incipient organic lesion of the spinal marrow, or its investing membranes. Nearly two months (with slight intervals,) were consumed in this treatment, with no signs of mercurial action on the mouth. But no sooner had this taken place, (and the affection of the mouth and faee was unusually severe,) than a decided crisis supervened, and we had the pleasure to witness a gradual amelioration of all the symptoms from that period. As soon as the mouth was healed, there was less impediment in the articulation and deglutition, an accession of feeling and warmth was felt in the extremities, and and a diminution of coldness and formication in the arms and fingers. Though every expedient was resorted to to expedite the progress of the case, yet some months elapsed before our patient regained the free use of her limbs; but I am happy to say that, at the present time, she can walk without pain, and without any support, and is, in other respects, in a good state of health. I consider the happy result of this case as mainly owing to the operation of the mercury on the system, for though other remedies of great power were used at the same time, yet, under all the circumstances of the case, and judging from analogy, we had no reason to expect so rapid a declension of the symptoms, as was the case, the moment the system became obedient to the action of mercury. Its effect in iritis in general, could hardly be more decisive, than we found it, in this distressing case.

To what other cause than its effect on the secretions from the liver, can we ascribe its potency in subduing many inveterate cases of colica pictonum? I have the particulars of a case of this kind, which had frequently recurred, and received relief from antispasmodics and aperients, but which has never returned since the mercurial fœter of the mouth was produced by inunction. Besides, the transition from irritation to inflammation, is often so rapid, and the tendency to organic mischief so strong, that it is an object of the last importance to avail ourselves of an early resort to this powerful agent, to counteract any incipient change of organization.

There are few, who have not perused the flattering accounts given by French practitioners, of the efficacy of mercury, in cases (and those of the severest kind) of acute peritonitis. Many such are recorded in our medical periodicals. In one of Laennec's reports, he gives us the history of the case of a young man, admitted in La Charite, who was under treatment for colica pictonum, but apparently with little success. In the mean time, an unequi-

vocal peritonitis supervened, and the usual treatment of La Charite was instantly suspended; leeches were applied to the epigastrium, which gave momentary relief; large mercurial frictions were quickly employed, and on the 5th day, ptyalism arose, which continued for a considerable time. But, he adds, that "*from the moment salivation appeared, every other symptom of disease disappeared.*" "Mais le malade se trouva parfaitement gueri, et de la peritonite, et de la colique de plomb, dès qu' il fût comménce à saliver." In puerperal peritonitis, our continental brethren appear to have availed themselves of this combination of mercurial friction and blood-letting. M. Valpeau confesses his want of success in these cases, from the ordinary modes of treatment. From the instances recited, it appears, that a mitigation of the abdominal pain and tension, usually followed the employment of the mercurial friction; and he does not hesitate to affirm, that in some instances, the most imminent symptoms were relieved, and the patient apparently saved from threatened dissolution. The peculiarity of the treatment, consisted in the extent of the mercurial inunction, as much as ℥ij. ℈ of the ointment, sometimes twice a day; in more urgent cases, every two or three hours.* I have not, myself, adopted this system to the extent here advised, because I have often succeeded with a smaller quantity; but there is no reason to doubt the fidelity of these reports. Cases do occur, occasionally, where we apprehend an otherwise fatal result, in which such a step is justifiable. We have often to decide between two evils, the greater of which is death.

Sometimes, indeed, a certain constitution of the atmosphere, (malarious, if you please,) impresses a peculiar character on most diseases that occur during its influence. Who has not observed a disposition to metastasis, more prevalent at one time than another; or a peculiarity of type manifested in the reigning maladies of the season? Has it not often happened that, under this atmospheric influence, diseases will wear an inflammatory aspect, which experience shews to be inimical to vigorous depletion? It appears to me, that it is especially to this class of cases, that the aid of such a remedy, as mercury, is applicable, if judiciously managed, so as to obviate the necessity of too often recurring to loss of blood.†

* It is not always desirable that the nature of the ointment should be known, where objections might be started. I have, occasionally, used the mercurial ointment of Mr. Donovan, which is *of a different colour*, and is usually, if prepared properly, as efficacious as the ordinary form. Mr. Donovan prepares his ointment, by continually agitating together, lard and black oxide of mercury, at the temperature of 350° Fahrenheit, for two hours, during which, every ounce of lard combines with twenty-one grains of oxide.

† It is not denied, that salivations are sometimes most imprudently brought on by an incautious exhibition of the mineral, and some may have fallen victims to this imprudence. The examples of this kind, are, at any rate, rare, perhaps

Look at the interesting account of the penitentiary endemic in 1824, by Dr. Latham. In some of the cases, the abdominal pain was aggravated by pressure, and attended with pyrexia; in these, bleeding, blisters, &c. were employed, but the consequence was, only a temporary respite from suffering; and it was not before, as a last resort, the use of mercury in various forms and combinations was fairly tried, that the malignant ravages of this fatal endemic *received a decided check.**

In most instances, the salutary effect of this plan was unquestionable, and the condition of its success seemed to be, that it had procured salivation. The dose and combination was varied according to circumstances, but, (the report goes on to say,) as they became salivated, in succession, *they were all freed from the symptoms of their disorder.* In several cases, in which the agony from tormina and tenesmus was extreme, and the evacuations were enormously frequent, and consisted altogether of morbid secretions or blood, fifteen grains of calomel and two grains of opium, were given at a dose. In many, there was a salutary impression produced, after the first or second dose, though the relief seems not to have been complete or permanent, unless it was followed up to salivation.

Among the endemics of the penitentiary, we find also several cases of phrenitis, indicated by sudden and acute pain in the head, succeeded frequently by vertigo, strabismus, dilated pupils, &c. In these cases, bleeding did no good, and blistering yielded but temporary relief. Most of these cerebral diseases were co-existent with those of the bowels, and came, at last, to be regarded as the same disorder, having the same origin, and requiring to be treated by the same remedy. The mercurial plan, did, in fact, accomplish the relief of both disorders, when they appeared in combination, and of each, when either occurred alone; and it often happened, that the cure of one, seemed to prevent an invasion of the other.

It is quite evident, from the preceding remarks, (drawn from a perusal of Dr. Latham's excellent work,) and every one's own experience will confirm the fact, that disorders not similar in the mode of developing themselves, differing too in name, according to the organs implicated, *may have, in common, some morbid condition* of the system, which indicates identity of origin, and requires identity of treatment. It is thus that nature mocks the arrangements of nosology, and displays to the astonished prac-

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not one in a thousand of those who use this remedy. Fortunately, in most cases, it is not necessary to run the risk of the supervention of ptyalism, and in all, as limited an accumulation, as the urgency of the case admits, is most desirable. All that is here inculcated, is a greater latitude in cases of a *more desperate kind*; "anceps remedium melius est quam nullum."

* Vide Dr. Latham's account of the disease prevalent at the general penitentiary.

titioner, an assemblage of symptoms, apparently incompatible, yet, in their origin, similar, and vincible by the same means. Other discoveries may hereafter add to our store of resources, equally valuable remedies. At present, the materia medica contains no article so extensively useful in its various forms, as that which is the subject of the present paper.

I wish, however, to be understood, not as advocating an indiscriminate use of mercury, *(a practice already too prevalent,)* but only in special cases, and particularly when the life of the patient is in danger; or where there is reason to suspect some disorganizing process going on, which no other remedy, we at present know, is so likely to arrest. If experience can shew that the career (to all appearance fatal,) of a disease, is sometimes checked by the intervention of this powerful agent, who will hesitate between the chance of ptyalism, and the prospect of saving life? That cases have occurred, where the remedy has proved worse than the disease, I admit, but this has generally arisen from some peculiar idiosynansy of the patient, or incautious administration on the part of the practitioner. It cannot be denied, that there is a good deal of empirical abuse of this mineral, and no wonder that bad consequences should occasionally follow, when we are so much in the dark about its operation. Probably there are no two constitutions that are similarly affected by it in all respects. However this may be, it is of the last importance that every practitioner should examine for himself, and while he is not led away, by undue panegyrics on the one hand, so, on the other, he should equally avoid following that tide of prejudice, which is never more injurious, than when exercised against improvements in the medical art.

ARTICLE III.

Remarks on the Pathology of diseases of the Heart, and on a new genus of Cachectic Diseases, denominated "Cachexia Africana."

BY JAMES M'C CABE, M. D., CHELTENHAM.

In the last edition of Dr. Gregory's (of London,) excellent treatise, "On the Elements and Theory of the practice of physic," a new genus of disease, of the class Cachexiæ, is introduced, which he has appropriately designated "Cachexia Africana." For his knowledge of this disease, and the description which he gives of it, he acknowledges that he is indebted to my Inaugural Thesis, published in Edinburgh, in 1819, to which he refers; and also to some Reports on the same subject, by Dr. Fergusson, now of Windsor, but who, at the time the reports were written, was Inspector General of Hospitals, in the West Indies. The description of the disease is faithfully given by Dr. Gregory, but there is one error, into which he has fallen, that is, with regard to the description of persons who are the subjects of it,

which it is of importance to correct, and which, no doubt, he will correct in a future edition of his work. Dr. Gregory seems to think that the disease is peculiar to Negroes: such is not the case, and the description given of it both by Dr. Fergusson and myself, was taken from European soldiers. The Royal West India Rangers, and the Royal York Rangers, both European regiments, occupied in succession, the same barracks, in the island of Trinidad. They both suffered severely from the disease, and it was from these corps that our descriptions were taken. As the subject is so much connected with the pathology of diseases of the heart, I will here insert a copy of the report, which I transmitted to the Director General of the medical department of the army, accompanying a morbid preparation of the heart of a soldier who had died of the disease. This preparation is, I believe, now in the museum at Chatham.

Extract from a report dated Trinidad, 1817, addressed to the Director General, of the Army Medical Department, London.

"The preparation herewith transmitted, is the heart of a man who died, a most marked case of that disease, which has been called in this island, *mal d'estomac*, but which may be more properly considered the effect of a complication of disorders, inducing a cachectic habit, and a broken constitution. A soldier at this station, after having had several attacks of fever, remittent and intermittent, and probably several attacks of dysentery, after each of which his constitution had been visibly impaired, becomes of a pale and sallow complexion; his feet and legs swell, particularly in the evening; his stomach and bowels are generally out of order; he has frequent palpitation, and walking up an ascent, occasions a sense of suffocation. In the more advanced stages, his stomach rejects food; the cellular membrane over the body is distended with fluid, and being almost transparent, exposes to view a peculiar white adipose substance, deposited in the cells of the cellular membrane. The breathing, at length, becomes more difficult, and the slightest exertion occasions a sense of faintness; the face becomes bloated, and the eyes haggard and ghastly; the pulse small and unequal. These aggravated symptoms are not present, until a patient has already suffered from several attacks of disease; but a certain approximation to this state is observable after each imperfect recovery, and the constitution appears, after each successive attack, to be rendered less capable of effecting its own cure.

"Intemperance may be considered one of the principal causes of this disease, or rather, of this complication of diseases; and when this change has taken place, the unfortunate sufferer becomes more infatuated than ever with the love of ardent spirits. The uncomfortable sensation which he experiences in his stomach, he imagines, is relieved by the stimulus of spirits; and as it probably produces some alleviation both of his mental and corporeal suffering, no consequences can deter or prevent him from indulging in the most dangerous excesses.

"The most remarkable circumstance that presents itself with regard to this preparation, is its great want of muscularity; and the quantity of fat deposited about its base. The ventricles, instead of being firm and muscular, yield on pressure, and their sides close together like a pouch or membranous bag. The great want of muscularity is not now so evident in the preparation, as it was in the subject at the time of dissection. It has now been preserved during several months, in strong spirits, or what has been called by the planters, "high wines." The corrugating effect of the spirit, has now given to the preparation an appearance of muscularity, of which, at the time of taking it out of the subject, it was entirely destitute.

"The following were the appearances on dissection of the subject, to which this morbid preparation belonged. Surface of the body white; cellular membrane distended with fluid, and almost transparent; an incision, made along the inner side of the thigh with a scalpel, was followed by a copious discharge of a watery fluid; the cells of the cellular membrane filled with fat; a quantity of fluid between the dura and pia-mater; a preternatural quantity in the ventricles of the brain and base of the skull; the whole cavity of the chest filled with water; the heart deprived of its muscularity; about an ounce of a yellow substance, of the consistence and appearance of jelly, in the right auricle; a quantity of dark-coloured coagulated blood in the same auricle; the liver indurated, and of the colour and consistence of new cheese."

"To deduce any consequences from this remarkable state of the heart, connected with cachectic disease, appears difficult. It may not, however, be uninteresting, to consider some of the principal causes which are supposed to occasion this deranged state of the system, and to see how far they are capable of producing the morbid changes above mentioned.

"The stimulus of spirits taken into the stomach, occasions an increased action of the heart and arterial system, by which the blood is propelled into the extreme vessels, producing a diaphoresis on the surface. The soldier, while under the influence of excesses, frequently exposes himself to the damp and cold chills of the night. The difference of temperature is very considerable at this station, at different periods of the day and night. A soldier, under the circumstances here mentioned, who has been exposed during the day, to a temperature of about 86 degrees, is particularly liable to be chilled by exposure to a damp atmosphere of about 62, to which the thermometer generally sinks here at night, or about gun-fire in the morning. The impression of this damp and cold air on the surface of the body, causes the blood to retire from the extreme vessels, to the heart and other internal organs. The blood, driven on these organs, occasions a local re-action, and the watery part of it being carried off by the exhalents, a more inflammatory diathesis is occasioned. Is it not probable that this excessive action of the heart, occasioned

and continued by the causes already mentioned, and directed on itself by the re-action on the surface, is the cause of the destruction or absorption of its own muscular structure ?

"I have seen in some subjects, that had died of this disease, a layer of coagulable lymph, connecting the surface of the heart to the pericardium, so firmly, that it required a considerable degree of force to seperate them. This circumstance would appear to afford a proof of the previous existence of inflammation of the heart; for, although, this lymph might have been effused from the vessels of the pericardium, we can scarcely suppose the existence of inflammation of the pericardium, without its having extended to the organ which it surrounds.

"By whatever process the muscularity of the heart is destroyed, the fact of its being so, is proved by this preparation. The first impression suggested by its appearance, on dissection, was surprize, that a heart so destitute of muscularity, could have given to the blood the impetus necessary to carry on the circulation. The heart thus deprived of its muscularity, is incapable of propelling the coloured part of the blood into the extreme vessels ; the consequence of which is, that transparency of the skin and cellullar substance, so remarkable in this disease. The languid circulation is probably the cause of the great deposition of fat which takes place in the cellular membrane, over the whole surface of the body, and gives to the skin the white and flabby appearance.

"With respect to the gelatinous substance and coagulated blood found in the right auricle, I can only hazard a conjecture. From the languid action of the heart, in the last stages of the disease, it is probable that, during its dilatation, the auricle could not completely empty itself of the whole of the blood received from the cavæ, but that a certain portion of it remained in contact with its sides, which was afterwards increased by the accession of more, as the circulation became more languid. And that the gelatinous substance was formed by the decomposition of the stagnant blood; or, by the natural heat of the heart, occasioning decomposition."

When the above report was written, the subject of diseases of the heart, had not so much attracted the attention of the profession, as it does at present; and, whatever may be thought of the theoretical part of the report, the facts which are contained in it, cannot fail to be interesting to those who are engaged in such pathological inquiries. The opportunities afforded in the regimental hospitals of the army, of comparing the histories of cases with their post-mortem examinations, are peculiarly advantageous in the study of pathology. Even the great London hospitals are inferior to them in this respect; for in these, the physician knows little of the previous history of his patient, or of the diseases by by which his constitution may have been previously impaired: hence one great source of fallacy in his practical deductions ; he

is likely to attribute to the last and fatal disease, morbid appearances, which may have been induced by former illnesses. A mistake of this kind, is likely to influence the physician's practice, and lead him to prescribe strong, or even violent, remedies, in the hope of preventing these morbid changes. Suppose such remedies used, in cases in which these morbid changes have already taken place. Bleeding and calomel, and starvation, however heroically prescribed, and implicitly submitted to, cannot remove them, but may soon exhaust the vitality of a broken constitution. These remarks apply especially to morbid adhesions and morbid thicknesses, which certainly indicate the previous existence of inflammatory action; but the inflammation which produced them, may have existed long before the patient was attacked by the last and fatal disease. Another source of fallacy with respect to diseases of the heart, may originate in a name implying a theoretical opinion. In cases in which the heart has been found enlarged, the name of hypertrophy has been given to it. This term implies an excess of nutrition, and involves in the very name, a practical rule of treatment; that is, to reduce, or cut off, this excess of nutrition. This is usually attempted by copious bleeding, low diet, and large doses of mercury. That there is variety in the natural size of the heart, as there is in the other organs and structures of the body, there can be no doubt; but that any enlargement produced by disease, deserves the appellation of hypertrophy, or would be benefitted by the remedies which that name is calculated to suggest, would appear to be very doubtful. In the preparation alluded to in the report, and in many others which the writer has since examined, the muscularity of the heart appeared to be diminished, and consequently its solidity and power of propelling the blood. Even in dissections of the heart, where the ventricles are said to have been hypertrophied, I find that the enlargement, or thickening, of its parietes, is usually attributed to interstitial deposition among the muscular fibres, and not to any increase of size in the fibres themselves. Interstitial deposition and thickening of structures in other parts of the body, are the effects of disease, and not of excess of nutrition. They are a source of weakness, and not of strength; and it cannot reasonably be doubted, but that such depositions between the muscular fibres of the heart, are a source of debility, and not of power, in that organ also; that such enlargement, or apparent increase, of muscularity of the heart, ought to be attributed to disease, and not to excess of nutrition; and that instead of increasing the propelling power of the organ, it renders it less capable of performing the function of circulation.

Although much attention has of late been bestowed on diseases of the heart, it is probable that irregularity of its action is frequently mistaken for organic disease. Whatever diminishes nervous energy, whether through the medium of mind, or body, weakens the heart's action, and renders it irregular and uncer-

tain. The frequency of palpitation, from moral emotions, is generally known. The frequency of it from the operation of drastic purgative medicines, must be known to every medical practitioner. There are some constitutions in which even a moderate dose of calomel, or even of blue pill, is invariably followed by irregular action of the heart. Surely, this being the case, we ought to hesitate before giving ten or twenty grain doses of calomel, with the hope of removing diseases of this organ!

We know that the sudden arrival of a friend; the announcement of unexpected news; or the apprehension of danger, will alter the heart's action; and although constitutional firmness and moral training, will render this less perceptible in some individuals than in others, in all, the state of the general health will very much influence the effect. In the palpitating heart, and in the same heart in a state of comparative quiescence, the organization is the same; the difference must therefore be ascribed to the operation of external agents; and if the pathological auscultator, in forming his diagnosis, do not take all these circumstances into consideration, it may lead him to a mode of practice that may be injurious, or even dangerous. In conclusion, is it not probable, that in most of those cases which are considered diseases of the heart, that organ is only secondarily affected? That instead of being idiopathic, the disease of the heart is only symptomatic of a generally diseased state of the system, or sympathetic with disease of the lungs, or a disordered condition of the digestive organs?

ARTICLE IV.

Fever, attended with anomalous muscular pains, simulating Rheumatism; formation of Matter, etc.

BY CHARLES W. TURNER, M. R. C. S., AND L. S. A.

November, 2, 1830.—Mr. A. B. a medical student, in his 21st year, of a scrophulous habit, and subject to glandular enlargements, terminating in abscess, was attacked two days since with symptoms of fever, but of so mild a description, as to have attracted but little notice, till to day. He labours under great nervous depression; pulse quick, small, and without power; much head-ache, more particularly confined to the occipital region; alternations of heat and cold, although the temperature of the skin is never above the natural standard; nausea; loss of appetite; bowels freely open, having taken aperient medicine the day before.

Suspicion being entertained that he had been exposed to the small-pox contagion, active remedies were witheld for a few hours. An evaporating lotion was directed to be constantly applied to the head, and a saline draught, with tartarized antimony, to be given every three hours.

Nov. 3rd.—8 o'clock, p. m.—Has passed a very restless night, and the pain of the head continues unabated; pulse 110, full and strong; throbbing of the temporal arteries; a heaviness about the eyes; tongue loaded; bowels relieved this morning; makes but a small quantity of urine, and that of a high colour; skin hot; complains of thirst. No eruptive disease having appeared, and the nature of the complaint obvious. He was ordered to be cupped from the back of the neck, and to continue the use of the lotion and mixture.

10 o'clock, p. m.—The patient lost eight ounces of blood, when becoming faint, it was considered advisable not to take more. The pain of the head is relieved, and he says he feels lighter; pulse reduced both in strength and frequency; a little moisture on the skin; bowels open twice during the day. Contin. in usu lotionis et mist. Sumat. Hydr. c creta gr. iij. et pulv. rhæi gr. vij. cras mane si opus sit.

4th.—This morning the head is tolerably free from pain; has passed a very restless night; skin hot; pulse 90, full, even beat; has no pain or tenderness of the abdomen; respiration rather quick, but free, and gives him no pain. It may be proper to observe, that he rarely draws a full breath. Pergat.

10 o'clock, p. m.—Little alteration since the last report. Is very restless.

5th.—8 o'clock, a. m.—Passed a very sleepless and restless night, and complains of considerable pain of the head; tongue more loaded in the centre, but the tip and edges clean and red. He has, for the first time, a little cough, which gives him great pain of the chest, more particularly on the sides, by the intercostal muscles being put into action; this tenderness of the intercostals also accounts for the cautious manner he breathes, which continues the same as remarked yesterday. Skin hot; pulse full, 92. Ordered to apply ten leeches to the temples, and to persist in the use of the other remedies.

10 o'clock, p. m.—The application of the leeches has been attended with the best effects; the head is free from pain; complains excessively of the pain of the chest on coughing. It does not hurt him to draw a full breath, although he rarely can be induced to do so, and it is done very gradually, and with much caution. Passes but a small quantity of urine, and that with difficulty. Cont. mist. sinè antimon add. spt. æth. nit. 3i. Repet. lotio. Sumat extr. hyoscyam gr. v. tussi urgente.

6th.—8 o'clock, a. m.—Still very restless; has obtained no sleep; head free from pain; pulse 98, and rather hard; tongue white in the centre, the edges and tip being of a bright scarlet colour, and the papillæ enlarged; bowels open; passes more urine, and without difficulty; complains of great pain all over the abdomen, and cannot bear pressure. Ordered 12 leeches to the abdomen immediately, afterwards to be well fomented. Contin. lotio et mist. Sumat. Ol. ricini 3iij. cras mane si opus sit.

10 o'clock, p. m.—The leeches have bled freely, and afforded great relief; the pain subdued. Still complains of pain of the muscles of the chest; also of the shoulder joints; the left knee joint is comparatively easy, but the right is most painful, so much so, that he cannot bear it to be moved; no pain is caused by pressure on any other part of the joint, than the upper part of the tibia; there is neither redness, nor increase of temperature.

7th.—8 o'clock, a. m.—No tenderness of the abdomen; tongue much whiter, and more loaded; pulse 99; skin natural temperature; has passed a very restless night, and is not able to move in bed, on account of the swelling and tenderness of the larger joints, more particularly of the right knee, (of which there is considerable fulness,) the right upper extremity, and both wrists. He has great pain of the left testicle, from spasm of the cremaster muscle. Ordered to continue the saline mixture during the day, to foment the parts in pain with a strong decoction of poppies, and to take six grains of Dover's powders at bed time.

10 o'clock, p. m.—The fomentation relieved the pain for a short time, which is now again very severe. Ordered to continue the hyoscyamus pills, if necessary; also, the saline mixture, with the addition of ℥xij. of the tincture of hyoscyamus to each dose.

8th.—Slept two or three hours during the night, and is now in a profuse perspiration; head quite free from pain; tongue white, the edges natural; no pain or tenderness of the abdomen; bowels open; makes plenty of urine, and does not complain of thirst; there is considerable difficulty in deglutition, and pain of the submaxillary gland on pressure; also of the muscles underneath the lower jaw; breathing much the same; the pain of the joints continues exceedingly severe; suffers a good deal from cardialgia. Ordered a mixture with soda, and to take five grains of Dover's powder twice a day.

10 o'clock, p. m.—Has had some shivering, in other respects, as last report.

9th.—Slept a good deal last night, and perspired profusely; pulse full and soft, 90; pain of the joints still severe, but mitigated; tongue covered with a thick white fur; bowels open once to day; makes water freely. A red streak, about the breadth of two inches, was observed on the back of the right fore-arm, commencing above the wrist, and extending nearly as far as the elbow. From the severity of the pain, he feels extremely anxious to have opiates, and as they have been hitherto taken with advantage, he was ordered a repetition of the Dover's powder at shorter intervals.

11th.—Has had diarrhœa since four o'clock yesterday afternoon, and, unfortunately, no intimation of it was made till this morning at 10 o'clock. The change which had taken place since yesterday, was very great. He has short breathing, and cannot draw a full inspiration without excruciating pain; there is a general tenderness all over the abdomen, but particularly in two or

three places, viz.; in the right hypochondrium, just under the ribs, and again a few inches below this; also in the left hypochondrium. He cannot bear the slightest pressure over either of these places, and almost every time he breathed, a pain shot up, which, he said, "went through his heart;" added to this, there was great oppression of the chest; the motions passed involuntarily. Four leeches were applied to each of the tender places, (three.) An enema of starch and laudanum was thrown up. A draught of twenty minims of tr. opii, and five grains of Dover's powder, was given. In about half an hour, the leeches were removed, because the patient became faint; the faintness went off, and he felt much relief; he became tranquil, and slept for several hours; pulse 90, devoid of any hardness.

10 o'clock, p. m.—Has slept several hours, and perspired considerably. He has had no return of the diarrhœa for the last two or three hours.

11th.—Sent for in haste at a quarter past 4, a. m. For the last two or three hours, he has been extremely uneasy; the face indicative of great anxiety; breathing short; a wildness about the eyes, although perfectly free from delirium; complains of a severe shooting pain up the rectum; bowels not opened since yesterday evening; considerable moisture on the skin; pulse 100, small and feeble; feet warm. On examining the right knee, fluctuation was observable. A draught of sal volatile was given, and an enema, of gruel and castor oil, thrown up, which afforded relief to the pain of the rectum.

11 o'clock, a. m.—Evidently sinking; countenance anxious; pulse small and quick, 128; cold perspiration; stomach remarkably irritable, rejecting every thing taken; the fluid thrown up, of a dark brown colour. Wine and water, brandy and water, with opium, were given at intervals, but the stomach retained them only a short time. The forearm, in the situation of the red streak, is now changed to a lived hue.

He died at 4 o'clock, p. m.

Inspectio cadaveris, twenty-four hours after death.—The body greatly discoloured. On making an incision through the integuments of the knee-joint, the capsular ligament was seen distended, and on puncturing it, at least six ounces of tolerably healthy pus escaped. An incision was then made in the right fore-arm, in the direction of the red streak; the cellular membrane was healthy, but on dividing the fascia, a considerable quantity of thick reddish yellow matter exuded. Another incision was then made into the right shoulder joint, and continued to the elbow; no deposition had taken place within the joint, but a large quantity of matter was formed under the fascia, and between the muscles surrounding the joint. The muscles were full and firm, but of a darker colour than usual.

On opening the abdomen, a large quantity of extremely offensive gas escaped. The peritoneal surface of the small intestines exhibited, in two or three places, a blush of inflammation; they

were agglutinated, but from the easy manner in which these adhesions were separated, there can be no doubt of their recent formation. On laying open the ileum, and a portion of the jejunum, distinct patches of inflammation were observed. The peritoneum covering the abdominal muscles, was perfectly free from all appearance of inflammation. The liver was enlarged, and of a much darker colour than usual; but the structure was ascertained to be healthy. The stomach totally free from inflammation, and contained about half a pint of fluid similar to that thrown up during life. About two pints of sero-purulent fluid were effused into the abdomen. The rest of the abdominal viscera were healthy, and no deposition of matter was found in any.

Thorax.—The lungs emphysematous, of a dark colour, and gorged with dark blood. The right ventricle of the heart was thicker than usual, and contained a good deal of dark liquid blood; the blood was observed to be in this state throughout the body. Two ounces of fluid were effused into the pericardium, and about two pints into the pleural cavities.

Observations.—The symptoms with which this disease set in, were those of simple continued fever, and judging from the state of the pulse, the soft skin, and the healthy secretions both from the kidnies and bowels, there was no reason to entertain otherwise than a favourable opinion as to the result. The diarrhœa, however, which supervened, and which was permitted to continue so long unchecked, was, in itself, sufficient to materially alter this opinion; and when we considered the peculiar constitution of the patient, and the fluctuation observable in the right knee-joint, the case was at once looked upon as hopeless.

From the parts that were affected with pains, there was some reason to suppose that rheumatism existed, with fever; but on the further developement, and more minute investigation of the symptoms, this opinion was soon laid aside. The symptoms, in many respects, resembled those of rheumatism, the extent of which I will now proceed to point out. In the first place, the larger joints were the seat of pain, corresponding in that particular, to rheumatism. Secondly, the presence of matter, which is a termination so unusual, that it could not, with propriety, be considered a consequence of rheumatism, unless attended with many and well marked symptoms denoting that disease; but as it is possible for the synovial membranes to take on the suppurative form, and as it was accompanied, in this instance, by other symptoms simulating rheumatism, I have thought it right to mention it in this place. Thirdly, the profuse perspiration, without mitigating the pain.

It now remains to be shewn how far these symptoms may be accounted for, as existing independent of rheumatism.

With respect to the first observation, although the parts which were affected are usually the seat of rheumatism, yet, in this case, the characteristics of that disease were wanting, viz. great and *general* tenderness of the joint, attended with heat and red-

ness. These symptoms appear more or less strongly marked in the course of *four and twenty hours;* whereas, here, no muscular pains occurred, till after the *fourth* day he was seen; the fever attending rheumatism, too, is purely of a sympathetic kind, and of the inflammatory type. Secondly, the unusual occurrence of its proceeding to suppuration. Thirdly, as to the profuse perspiration, which may be accounted for by the debilitated state of the patient, added to the pain he was enduring from the general muscular affection; the perspiratory secretion, too, in rheumatism, is characterized by a strong acid odour, which peculiar property was here entirely wanting.

Thus, then, I have stated how far the symptoms resemble those of rheumatism, and have attempted to show that however great the analogy may have appeared at first sight, yet that a more minute enquiry would speedily dissipate any idea that may be entertained of identity.

The most remarkable circumstance is, that mischief to such an extent should go on, and that, too, with so little disturbance of of the system in general; hectic fever (the common attendant on formation of matter,) was not present throughout, shivering only observed once, and the pulse was not above 90, except when he laboured under muco-enterite, and that with so little pain (comparatively speaking,) pus should be deposited to such an extent, appears the more unaccountable, when we consider the *extreme* pain which attends inflammatory rheumatism of the knee-joint, and the most *excruciating* pain, which is the consequence of inflammation of that articulation. Dr. Tweedie, in his Clinical Illustrations of Fever, has related a case of malignant scarlatina, and which was attended by inflammation of the synovial membranes of the wrists and knees; on dissection, the synovial membranes were found "much inflamed, and contained a considerable quantity of pus." The inflammation, in this case, arose from metastasis from the head and throat, and was marked (as may be expected,) with "great constitutional excitement.

The deposition of the matter amongst the muscles of the forearm, shews a strong tendency to its formation; indeed, this predisposition, taken in connection with a peculiar state of constitution, caused by the fever, appears to be the only mode of at all accounting for its presence.

Dr. Stokes, in the Dublin Transactions, relates that a fever which was prevalent at Dublin, caused in those constitutions that were favourable to the generation of tubercles, their speedy developement; so much so, as to make a patient run through all the stages in seventeen days; and he gives several instances of patients just convalescent from fever, becoming the subject of tubercular phthisis, which advanced very rapidly, so that in post-mortem inspections, tubercles were seen in the various stages, both of formation and suppuration. One of the conclusions which he draws, is, "that the developement of tubercles, in a predisposed habit, is greatly favoured by an attack of continued fever."

Now, as fever in that instance seemed strongly to favour the formation of tubercles, in constitutions *liable* to that form of disease, it is not unreasonable to suppose that fever may, in like manner, account for the appearance of pus in a constitution *unusually prone to its formation.*

The conclusions I have arrived at, after carefully considering the case in all its bearings, are as follows:

First.—That the essential character of the disease was fever.

Secondly.—That these muscular pains arose entirely from a modification of fever, and were quite distinct from rheumatism.

Thirdly.—That the pus may be fairly attributed to the circumstance of fever occurring in a constitution, alike scrophulous, and strongly predisposed to the formation of tubercles.

ARTICLE V.

A Report of the Out-cases of the Birmingham Infirmary, attended by Mr. Parsons, *during the year* 1830, *distinguishing the separate Quarters, ending March* 25, *June* 25, *September* 29, *and December* 31.

DISEASE.	1st Qr.	DIED.	2nd Qr.	DIED.	3rd Qr.	DIED.	4th Qr.	DIED.	Total.	DIED.
Abortus,	2		3		8		6		19	
Abscessus,	6		14		21		15		56	
——— Psoaticm.	1		...		2		...		3	
Amaurosis,	...		...		...		1		1	
Amenorrhœa	5		6		7		5		23	
Anasarca,	2	2	3		...		...		5	2
Apoplexia,	2	2	2	1	2		3		9	3
Aphthæ,	1		...		5		...		6	
Ascites,	...		...		1	1	...		1	1
Asthenia,	13		22		28	1	17		80	1
Bronchitis, Acut.	...		...		...		2		2	
——— Chronic,	56	8	14	1	8		51	3	129	12
Calculus, (Vesicæ,)	1		...		...		2		3	
Carcinoma,	1	1	1		...		2		4	1
Catarrhus,	43		41		59		49		192	
Cephalæa,	10		6		12		8		36	
Cholera,	...		3		21		11	1	35	1
Chorea,	2		...		...		...		2	
Colica, (Pictonum,)	...		...		2		...		2	
Compressio Cerebri,	1	1	...		...		...		1	1
Concussio,	...		...		...		1		1	
Constipatio,	11		10		21		21		63	
Convulsiones,	1		1	1	3	1	3	2	8	4
Cynanche, (Tonsillaris,)	4		12		8		12		36	
Dentitio,	11		9		17		7		44	
Diarrhœa,	8		17		31	1	9		65	1
Dysenteria,	...		...		...		1	1	1	1
Dys-menorrhœa,	1		...		...		...		1	
Dyspepsia,	29		48		51		38		166	
Dysuria,	...		...		...		1	1	1	1
Enterica,	9		2		16		6		33	
Entropion,	...		...		...		1		2	
Epilepsia,	5		4		1		...		10	
Epistaxis,	2		1		...		1		4	
Erysipelas,	1		3		1		1		6	
Erythema nodosm.	2		4		1		3		10	

DISEASE.	1st Qr.	DIED.	2nd Qr.	DIED.	3rd Qr.	DIED.	4th Qr.	DIED.	Total.	DIED.
Febris, Intermittens, ...	1		...		...		...		1	
——— Synochus vel typh.	28	2	24	1	52	5	23	4	127	12
Fistula in Ano, ...	1		...		...		...		1	
——— in Perineo, ...	...		1		...		...		1	
Fracturæ, ...	1		3		2		7		13	
Gangrœna, ...	1		...		...		...		1	
Gonorrhœa	14		23		35		50		122	
Hæmatemesis, ...	...		2		...		1		3	
Hæmaturia, ...	...		...		...		1		1	
Hæmoptoë,.....	5		1		6		1		13	
Hæmorrhoides, ...	6		2		4		6		18	
Hernia, ...	3		6		2		...		11	
Hernia humoralis,.....	...		4		2		...		6	
Herpes, ...	1		1		...		2		4	
Hypertrophia cordis	...		...		...		1		1	
Hysteria,.....	1		...		3		1		5	
Icterus, ...	...		2		1		1		4	
Icthyosis, ...	1		1		...		1		3	
Incontinentia Urinæ, ...	...		...		2		...		2	
Inflammatio Ac.	29		12		22		13		76	
——— Chr.	...		3		4		...		7	
Laryngitis, ...	...		3	2	...		...		3	2
Leucorrhœa, ...	1		5		4		1		11	
Lepra, ...	3		3		...		1		7	
Lichen, ...	...		1		...		...		1	
Mania, ...	2		3		1		1		7	
Marasmus, ...	3	1	6		2	1	3	1	14	3
Menorrhagia, ...	6		3		5		2		16	
Neuralgia, ...	1		4		1		3		9	
Œdema, ...	1		2		3		2		8	
Ophthalmia, ...	1		2		3		4		10	
Paralysis, ...	5		1		4	1	1		11	1
Peritonitis, Ac.	1		...		...		...		1	
Pertussis, ...	2		4	1	13		2		21	1
Phthisis, ...	9	5	12	1	11	2	10	1	42	9
Pleuritis, ...	8		7		5		3		23	
Pneumonia, ...	3		4	1	6	4	6	2	19	7
Podagra, ...	...		...		...		1		1	
Porrigo, ...	5		12		3		8		28	
Prolapsus Uteri, ...	1		4		...		...		5	
Psoriasis,.....	...		...		...		1		1	
Ptyalismus, ...	...		...		1		2		3	
Purpura, ...	...		2		...		1		3	
Ranula, ...	...		1		...		...		1	
Rheumatisms. Ac.	10		7		5		4		26	
——— Chr.	25	2	28		29		19		101	2
Rubeola, ...	...		1		27	1	20	3	48	4
Scabies, ...	10		25		13		20		68	
Scarlatina, ...	...		...		4		15	4	19	4
Schirrus, ...	2		...		...		1		3	
Scrofula, ...	9		1		...		3		13	
Strictura Urethræ, ...	2		...		1		...		3	
Strophulus,.....	...		...		5		...		5	
Syphilis, ...	18		13		32		20		83	
Tenesmus, ...	...		1		...		...		1	
Tetanus, ...	...		1	1	...		...		1	1
Ulcera,.....	24		18		9		14		65	
Urticaria, ...	...		1		...		...		1	
Varices, ...	...		1		1		1		3	
Vermes Intestines, ...	8		14		7		14		43	
Variola, ...	...		...		3		30	5	33	5
Do. Post Vaccinam,.....	...		...		1		9		10	
Anomala, ...	30	1	27		34		24		115	1
	512	25	528	10	694	18	632	28	2366	81

The preceding table is given for the purpose of assisting in the attainment of correct information respecting the relative frequency and mortality of different diseases, in the different classes of society. In by far the greater number of instances, the persons who apply for medical assistance to the Birmingham infirmary, belong to the humblest ranks; they are, indeed, those who are generally in the habit of soliciting other kinds of parochial aid. And as the total number of out-patients of the infirmary, attended by my colleagues and myself, has now, for some years, averaged more than ten thousand annually, it is hoped that even a simple register of them, similar, perhaps, to the one here given, will be neither uninteresting, nor without value, in a statistical point of view. It was, at first, my intention to have given to this table a more detailed form, so as to have exhibited, in addition to what it already does, the proportionate frequency and fatality of the different diseases in males and females; and also in those persons above and below the age of ten years. To do this, however, would have required more time than I could at present conveniently give up for such purpose; and the same remark, a want of sufficient leisure, must also serve as the excuse for the paucity and general nature of the succeeding notices, respecting either certain diseases or particular cases.

Abortus.—In one of these cases, the tendency to premature delivery was very striking. The patient referred to, named Hannah Cook, 25 years of age, employed in pin-making, a sedentary occupation, has had, previously to her present illness, eight children, all of which were born dead, between the sixth and seventh months. She has again miscarried, as she thinks, at the seventh month. No motion of the child had been perceived for the three preceding weeks; it was born dead.

Amaurosis.—In this case, the iris of each eye acted when exposed to the stimulus of light. The patient was a female, not engaged in any employment likely to have been injurious to the eye. The skin, near the eyes, was blistered, and, to the exposed surface, strychnine was applied, and certainly with advantage; but the patient, disliking the mode of treatment adopted, discontinued her attendance at the infirmary.

Amenorrhœa.—One of the patients attended for this disease, began to menstruate at the tenth year; she was married when fourteen, and her only child was born before she was sixteen years years of age; since which latter period, she has never again menstruated, her age being now thirty.

Calculus.—In none of the cases of calculus, was any operation for the removal of the stone resorted to; in two, the pains were so much alleviated by the use of opiates, as to induce those patients to refuse having any thing else done. The other patient was eighty years of age, and much afflicted with asthma. He is now in the infirmary; but an operation, in this case, is not to be urged, his sufferings from the stone not being, in general, very severe.

Chorea.—The two patients with chorea, were cured by the occasional use of active purgatives; they were both girls.

Compression of the brain.—This case occurred in a woman much addicted to drinking. In a state of intoxication, she fell down a shop ladder, and she never completely recovered from the stupor which immediately followed the accident. A few days before her death, she was admitted into the infirmary. There was general paralysis of the limbs, and of the sphincter muscles, and she lived between three and four weeks after her fall. About three ounces of blood were effused over the whole upper surface of the right hemisphere of the brain, without any fracture of the bones of the head.

Concussion of the brain.—The case marked concussion of the brain, occurred in a man who was knocked down by a carriage. He remained in a state of stupor for rather more than three weeks, with occasional intervals (lasting for two or three days,) of consciousness; and in one of these intervals, he went from the Birmingham hospital, where he was first taken, to his own home. He came under my care eight days after his accident happened. Two of his ribs were broken; from this, however, he appeared to suffer but little. Since the accident, he has been completely deaf; and also, has several times manifested symptoms of insanity, for which he was taken into the infirmary, where he remained five weeks. He, sometimes, is able to attend to his business, but lately, the fits of insanity have become more violent.

Dysuria.—The case named "dysuria," occurred in a man upwards of sixty years of age, who had been hemiplegic for fourteen years. I saw him only a week before his death. The desire to micturate was almost incessant, and the act of micturition was attended with great agony. The sides of the bladder were a third of an inch thick, and the mucous membrane was spotted with many small ulcerations.

Enterica.—Under this term are placed cases, in general slight, of disorder of the alimentary canals, for which, no more specific name appeared well adapted. They occurred chiefly in children.

Gangrena.—This case occurred in a boy, who was detected in the practice of irritating chilblains on his toes, with pins; this he did to escape work. Three of his toes were destroyed by mortification, so induced.

Hæmaturia.—The patient, a man, aged 65, affected with hæmaturia, discharged for several days, a large quantity of blood, per urethram, during one day, as much as two pints. Three months after the cessation of that disease, he had an attack of apoplexy, and his right side became paralyzed. The right foot is now partially destroyed by mortification, apparently caused by deficient nervous action in that extremity.

Paralysis.—One of the cases of paralysis may be noticed; it occurred in a woman, Mrs. Freeman, of Bow-street, who, in descending from her bed-room, early in the morning of January 19, 1830, fell down nearly the whole flight of stairs; the back

of her neck, according to her own account, striking against the edge of several of the steps. She came under my care on the second day after the accident. Her arms and legs were then completely paralyzed; and this state was attended with a loss of sensation in the extremities, and generally over the surface of the trunk; the splincter muscles were unaffected; the temperature of the surface of the body was natural, although, to the patient, it appeared to be raised. There was no confusion, or affection, of the head, and a careful examination, shewed no injury to any of the vertebræ. From this condition she has now gradually, but not perfectly, recovered. During the progress of the case, the back was repeatedly blistered, and, to the exposed surface, strychnine was applied; and this remedy she also, for several weeks, took internally: it occasionally produced convulsions of the limbs; but her recovery did not appear to be accelerated by its use, her improvement being as great before, and after, the administration of the strychnine, as during the time of its employment. Although she is now able to walk about, nearly as well as she could previously to the occurrence of the accident, she still suffers from impaired sensation in the hands and feet.

Anomala.—Under this term are comprised various cases of accident, such as burns, scalds, &c. One fatal case is there given; it was that of a young girl very severely burnt over the head, chest, and belly. She died within forty-eight hours after the accident happened.

During the latter part of last year, and in the beginning of the present one, an inflammatory affection of the lungs was observed in the greater number of children ill with febrile diseases. Cases of synochus or typhus, of scarlet fever, and of measles, often became, on this account, peculiarly unmanageable. The repeated occurrence of this state of things, in my own practice, induced me to enquire of some of the other medical men connected with the charities of the town, as to their experience; and I found that this tendency to inflammation of the lungs, in most acute diseases of children, had forced itself upon their attention, as it had done upon my own own. Upon a reference to the table it will be seen that, during the three months ending in September, 27 cases of measles occurred, one of which terminated fatally; whilst, in the last three months of the year, out of 20 cases, 3 died. It will also be seen that, of 15 cases of scarlet fever, 4 were fatal. This was likewise observed in synochus, when affecting young children, though not to the same extent as in the exanthemata. Of the 19 cases of pneumonia, 15 occurred in children under eight years of age.

A very important fact stated in the table, is that respecting small-pox after vaccination. In December last, small-pox became epidemic in Birmingham. During December and January, its rate of mortality was very high; but since that time, the disease appears to have diminished in fatality, and, since February,

in frequency. The 39 cases given in the table, as occurring in the last quarter of the year, were all met with in December; of these, 9, or nearly one fourth, were instances of it after vaccination. Knowing that a strong feeling against vaccination still exists in the minds of many of the poorer class of society, of that class, indeed, which necessarily constitutes the great bulk of our infirmary patients, I carefully examined every case where vaccination was said to have been performed, and the result of such investigation is given in the table; but in none of the 10 cases there given, was the small-pox severe.

Birmingham, May 13, 1831.

ARTICLE VI.

Remarks on the connection between Abdominal Diseases and Chronic Meningitis; and on the application of Ice to the Head, illustrated by cases.

BY CHARLES HASTINGS, M. D.

The intimate connection that exists, between disorders of the digestive organs and of the cerebral system, has long been remarked by physicians. Of the various forms in which these complicated affections present themselves, there is one, termed, rather indefinitely, determination of blood to the head, which I shall briefly notice, as I have been frequently called upon to witness it in this neighbourhood; and I shall then proceed to relate some cases, that seem to me, in a pathological view, not undeserving attention, as they tend to shew the necessity of great regard being had to the state of the cerebral system, wherever the alimentary functions are disturbed.

Whatever may be the nature of the diseases designated by the foregoing vague terms, it is certain that in practice, it not unfrequently happens, that the medical man is called upon to treat certain cases of the above nature, which commence in a very undefined manner. It is, for example, no uncommon thing to meet with persons of all ages and both sexes, but, I think, more especially females, whose complaints, for some time, have seemed to be almost entirely confined to certain uneasy feelings in the epigastric region. When that part is pressed, there is tenderness; after eating, there is fluttering and palpitation of the heart, with a sensation of sinking, and to this state is apt to succeed flushing of the face, and sometimes uneasy feelings in the head, without much pain.

If the case be not at this time subjected to proper treatment, or even, occasionally, if proper treatment be adopted, there is likely to occur increased action of the carotid arteries, and very irregular spirits: a degree of elevation of mind, and hilarity of feeling, for a time, will come on, followed by a corresponding state of lowness. There is also the same inequality in the tem-

perature of the body; alternate flushings and coldness being present, but, for the most part, the extremities are cold, and the face and head hot. The pulse, when the last mentioned symptoms have set in, is generally small and frequent; but occasionsionally it is not altered from its natural state. The tongue is furred, and rather clammy. At no long period after this secondary state of what we may term cerebral irritation has commenced, it occasionally happens, that strongly marked symptoms of excitement of the brain come on. Delirium, generally mild, but of an insidious nature, sometimes makes its appearance, and ends in coma, and death.

This has often struck me as a very interesting piece of pathology, and one that challenges close investigation, on account of its trivial appearance at the commencement, which, I have before observed, is simply an uneasy feeling, and, as the patient expresses it, a sinking at the pit of the stomach. I shall not now stay to endeavour to discover what is the connection between this first simple state of uneasiness at the stomach, and the secondary one, vaguely called determination of blood to the head. My object, at present, being to call the attention of the reader to the simple fact of this connection between the two parts.

I am, also, desirous of pointing out, in what light this affection presents itself to my mind; and to shew, from morbid anatomy, what the pathological state, frequently denominated determination of blood to the head, really is in this instance.

In all cases of this kind which have terminated fatally, under my care, in the manner above pointed out, where post-mortem examination has taken place, it has never failed to appear, that the membranes of the brain have been much affected; that, in short, chronic inflammation had taken place in them, and had produced alteration of structure in those parts, particularly thickening of the arachnoid membrane, and effusion of a serous fluid between it and the piamater; as also, sometimes, although this is a more uncommon occurrence, into the ventricles of the brain. I have in most of the cases, but not in all, discovered traces of disease in the abdomen, as in the liver, spleen, or small intestines. The following case may serve to elucidate what has been just said.

Case I.

A young gentleman, aged twenty, came to me complaining of pain in the epigastrium, together with tenderness and flatulence. He had been, for some time, neither ill nor well. His tongue was furred and clammy. The pulse rather quick. He was advised to keep quiet; to have leeches, and take alterative medicines, and to eat only pudding and vegetables. He did not, however, think himself ill in a sufficient degree to submit to much regimen, and preferred pursuing his avocations, which were of a sedentary kind. Some time after, I was sent for to him, and found that he had symptoms of great general excitement, and

much nervous irritability come on. The eyes were red and prominent, and the face flushed. The carotids beat very forcibly, and the pulse in the wrist, was weak. His feet were cold. Notwithstanding the means adopted were vigorous, viz. blood-letting, mercurial purges, and such other remedies as were calculated to arrest inflammation of the brain, he sunk into a state of coma, and died.

Dissection.—The serous membrane, lining the abdomen, was healthy.

The liver was pale, and softer than natural. The lymphatics, on its surface, were very large.

The spleen quite pulpy. Its peritoneal coat was thickened, from inflammation.

The pancreas was healthy.

The small intestines in general were not much inflamed, but the ileum was very considerably so; its mucous membrane was slightly ulcerated. The mesenteric glands were generally rather enlarged. Those which were contiguous to that part of the ileum, which was so much inflamed, were very much so, and some of them seemed almost ready to suppurate.

The thoracic viscera were healthy.

Head.—There was a good deal of serous fluid between the arachnoid membrane and the piamater. The arachnoid was thickened by a deposit of fibrine. There was no effusion in the ventricles. The piamater was much increased in vascularity.

The vessels in the substance of the brain, were more loaded with blood than natural, but in other respects the organ was healthy.

In this case, then, whatever might be the primary state of disease, I unequivocally detected disease in the cavities of the abdomen and head. In the head, it was principally chronic inflammation of the membranes of the brain.

But, in addition to this inflammatory action evinced by the appearances of the membranes, the condition of the abdominal viscera, particularly called my attention. The duodenum, jejunum and ileum, were manifestly affected; the mucous membrane of the ileum being inflamed and ulcerated. The diseased action, however, did not extend to the large intestines, nor scarcely to any of the other organs contained in the abdomen.

It has lately fallen to my lot, to see a very remarkable case of a similar kind, in a girl of ten years old, in whom, the symptoms of disease in the membranes of the brain and spine, were so masked by the obviously diseased condition of the stomach and bowels, that the case proceeded almost to its termination, before the serious affection of the nervous system called for any attention.

Case II.

A young lady, aged 10, had, for some time, been subject to bilious attacks, as her mother used to call them, during which, the child had always morbid stools, and a sallow face. In one

of these attacks, she had a slight convulsive affection of the right arm and hand, which went off so slightly, that the medical gentleman in attendance, attributed it to intestinal irritation, as the bowels were obviously much in fault. The little girl took some medicine, and went into the country, looking thin and pale, and having very offensive and disordered stools, but not complaining of any thing excepting a twiching of one thumb, which only happened occasionally.

No improvement took place from the change of air, and she became rather feverish, on which account, another medical man, who lived near her new residence, saw her. He, also, was impressed with the notion, that every thing proceeded from abdominal irritation, and by this principle, the treatment was by him directed. Unsuccessful, still, were the well directed efforts to arrest the abdominal disease. Not long after the feverish movement commenced, subsultus tendinum came on, which was followed by dilatation of the pupil and blindness, affording the most unerring evidence that great mischief had occurred in the brain, or its investing membranes.

A state of coma succeeded, and soon ended in death. It was rather singular, that during the last illness, there was, notwithstanding the fever, very little flushing, but a constant sallowness, or, more properly, a dusky state of the skin was present.

Appearances discovered by dissection of the body.—The flexor muscles of the hand, contracted.

The vessels of the pericranium, passing through the parietal and occipital bones, from the dura mater, turgid. On removing the calvaria, the veins of the dura-mater found filled with a considerable portion of blood; and the veins of the pia-mater extremely full, seen through the transparent dura-mater.

A quantity of blood escaped on the surface of the latter membrane, upon removing the calvaria. On removing the brain from the basis of the cranium, more than six ounces of limpid fluid escaped, probably from an opening having been made into the fourth ventricle. A large portion of the same fluid also evidently escaped from the theca.

The coats of the spinal marrow betrayed signs of considerable inflammation.

A *transparent, jelly-like matter*, adhering to the arachnoid membrane, &c., and a good quantity of the same found at the base of the brain.

The vessels of the pia-mater very turgid, and a considerable effusion.

A pus-like matter beneath the arachnoid membrane.

The veins of the falx, full.

The medulla of the hemispheres spotted.

The plexus choroides pale; the vena galeni turgid; the anterior part of the septum pellucidum softened; the fornix almost dissolved, and very soft; the velum interpositum pale; the plexus halleri still more so; the arachnoid membrane very much thickened, and diseased at its base.

Intestines distended with flatus.; intus-susceptio of the jejunum; gut much contracted for two or three inches before coming to intus-susceptio; jejunum, and many parts of the ileum, highly vascular; ileum, within about a foot, and two feet of its termination, of a red, brick-dust colour.

Many of the mesenteric glands diseased, containing white, tuberculous matter, and hardened.

The spleen tuberculated, containing the same kind of matter as the mesenteric glands.

The liver healthy; here and there tuberculous matter beneath the peritoneal covering; none in the interior.

The mucous membrane of stomach, towards the pylorus, reddened, and covered with a grey, pus-like matter.

The head of the pancreas diseased and tuberculated.

Thoracic viscera healthy.

In the two cases just related, the mischief that accrued to the functions of the brain, as the result of inflammation of its membranes, was so great, that a fatal termination was produced at a comparatively early period. It is, however, no uncommon thing for the functions of the brain only to be partially affected by this chronic meningeal inflammation; and we have then, perhaps, a variety of feelings referrible to a disturbed state of the nervous system, which are sufficient to produce great discomfort to the sufferer, who is the victim of them; but the vital functions are maintained perhaps for years, notwithstanding the slow alteration of structure that is taking place in the membranes of the brain. Many of the nervous diseases that attend indigestion, are of this nature. I shall select one case, where many painful sensations in the head, which had been going on for years, in connection with imperfect alimentation, arose from slow alteration of structure of the arachnoid membrane, and serous effusion.

Case III.—Ulcerated Stomach; inflamed and thickened Arachnoid.

W. L., aged 60, a man of weak intellect, red hair, and fair complexion, had been, occasionally, a patient of the Worcester infirmary, for three years, during which, he had suffered much from giddiness, and uneasy feelings in the head. He was relieved by blisters to the neck, and a seton, but more especially by the application of a caustic, where the coronnal and sagittal sutures meet. For a long period, he had also been subject to abdominal pains and griping. Sometimes, also, he complained of sickness, but was not in the habit of vomiting. The pulse was not, for the most part, sensibly affected, but he was a good deal emaciated, although the appetite was not diminished. He had diarrhœa and slimy stools, with tenesmus. Pressure on the epigastrium produced pain. About three days before death, he had rather a sudden exacerbation of all his symptoms. Violent pain came on over the whole abdomen; the pulse became small, quick, and oppressed. He vomited once or twice; complained

more especially of tenderness under the margin of the ribs. Notwithstanding the use of all the usual means which were suggested by the state of the symptoms, a cold clammy sweat came on, and he died in a few hours.

Inspection of the body.—Head.—There was no remarkable appearance either in the scalp or dura-mater. The arachnoid membrane was found thickened and opake: on pricking it, a serous fluid, to the amount of about three ounces, escaped from between it and the pia-mater; the latter membrane did not present any appearance of inflammation, but some of the larger vessels seemed more distended than natural. The vessels of the brain seemed to carry more than the usual quantity of blood.

Heart.—On the membrane covering this organ, there were several patches of lymph, and it was too vascular; but there was no disease of the valves, and the entire organization of the heart itself was unimpaired.

The lungs were perfectly healthy in structure, but the pleura was universally too vascular, and a secretion of a white fluid, nearly of the consistence of serum, in which large flakes of lymph were swimming, had taken place to the amount of about a pint.

Abdomen.—The omentum majus was glued to the surface of the peritoneal covering of the intestines, and the intestines were united together by an exudation of lymph. The whole of the peritoneum was very vascular, and a large quantity of fluid was found in the abdomen, similar to that in the thorax. The mucous membrane of the large and small intestines, was perfectly healthy.

About the middle of the large curvature of the stomach, ulcerative absorption of all the coats of the stomach had taken place; but the contents of the stomach were prevented from escaping into the cavity of the abdomen, by adhesive inflammation taking place in the concave surface of the left lobe of the liver, by which means, a layer of lymph had been deposited all around the edges of the ulcer, and complete union had taken place between the stomach and the liver. After the stomach was removed from the liver, the opening formed by the ulceration of the stomach, would about admit two fingers; but, in the villous coat, the ulceration had extended in an irregular circle; the diameter of which might be about two inches. The coats of the stomach, for some distance around the ulcer, were much thickened; and near the cardia there was a small abscess, which contained two drachms of ill-conditioned pus. The lymphatic glands, situated about Glisson's capsule, were much enlarged, and contained a cheesy matter.

Observations.—The membranes of the brain appear, in this instance, to have been for years in a chronic state of inflammation, and the quantity of serous effusion which had taken place, was remarkably large. With respect to the ulceration of the stomach, it may be a question whether it existed previous to the meningitis, or came on afterwards. In either case, the state of

the membranes of the brain seems to have had a considerable effect in disguising the disorganization of the stomach. Giddiness of the head was the most distressing symptom: vomiting did not occur until a few days before death, when active abdominal inflammation had taken place.

The foregoing cases are principally valuable as links in the chain of evidence, which proves the close connection existing between some abdominal affections, and chronic inflammation of the membranes of the brain. They, and others of a like nature, seem to me to render it probable, that many of the symptoms called nervous, which are so harrassing in some dyspeptic cases, may be traced to a slow alteration of structure in these membranes; and they point out to us the great importance of attention to the state of the cerebral system, in treating such cases. We should, therefore, in all affections of this kind, in addition to the remedies which the disorder of the digestive organs requires, consider in what manner the affection of the head is to be treated.

Now, although the effect produced on the brain by these abdominal disorders, is cerebral congestion and slow inflammation of the membranes of the brain, in which condition the capillaries lose their tone in a great measure, and allow themselves to be dilated beyond their healthy calibre, by globules of blood, yet I have no reason to think that general bleeding is successful in mitigating, materially, the cephalic symptoms in those instances where the inflammation is of long standing, and the general strength has been impaired by prolonged indigestion. Local bleeding, however, by leeches or cupping, at the temples, or nape of the neck, and counter-irritation, by caustic or issue, in the neighbourhood of the head, is often very beneficial; but, I again repeat, that there is no one point in practice, of which I am more convinced, than that blood-letting requires, in this affection, to be used with great caution. It is my conviction, that it often proves prejudicial, by favouring the disposition, so fearful and fatal in its consequences, to serous effusion.

Under these circumstances, viewing with much suspicion any considerable loss of blood in these cerebral affections, the necessity will be conceded, of employing most sedulously all other means that are likely to remove the inflamed state of the membranes of the brain. Cold applications to the surface of the scalp, after it has been shaved, I have found very efficacious. In all cases of this nature, where there is an augmentation of the temperature of the head, and flushing of the face, they should be unremittingly applied. Ice, mixed with common salt, confined in a large bladder, and kept constantly applied to the head, I have found a very convenient and efficient means of effecting this purpose. This application has proved, in my hands, conspicuously beneficial, in some instances of inflammation of the membranes of the brain, where considerations have deterred me from much blood-letting.

From amongst others, I will cite the case of a young lady, whose recovery was forwarded by this remedy.

Case IV.

A young lady, aged 30, had been complaining, for some time, of tender epigastrium, and fluttering and palpitation from slight causes. Some time afterwards, her face began to flush, which was soon followed by delirium. The tongue was much furred; stools very unhealthy; pulse 120, small at the wrist, very throbbing in the neck.

She had been freely purged. Blood had been twice taken from the arm, and she had been cupped from the nape of the neck. The remedies, however, had not produced any good effect. The pulse got up to 140, and the extremities were cold, whilst the head was burning. It was manifest that farther loss of blood could not be borne. The head was shaved, and ice was applied to it, so constantly, that the scalp was kept quite cold for twenty-four hours; during the greater part of which time, the delirium was prevented, and the flushing of the face was much diminished. The carotid arteries did not pulsate so strongly. By a persevering use of the ice, and the occasional loss of small quantities of blood from the scalp, together with proper attention to the digestive organs, this young lady gradually recovered, and is now in a good state of health.

The above fact, and several others of a like nature, have induced me to consider this external remedy, as one of great power in the class of affections which I have been considering. It is, also, almost equally beneficial in the attack of pure phrenitis, although not in so conspicuous a manner, because, in this more acute disease, the strength of the system enables the patient to bear a free use of the lancet, and the more rapid march of the symptoms imperiously requires it.

It is always desirable, when we can, to offer a rational explanation of the effects of a remedy, as it often leads on to still more successful applications of it. In this instance, it appears to me, that a very lucid explanation may be given of the modus operandi of this remedy, by experiment on living animals.

From the account I have given of the dissection of these cases, it appears that, as far as the head is concerned, the symptoms are produced by an inflamed state of the membranes of the brain; or, in other words, by the capillary vessels of those parts being dilated, and congested with blood. Let us, then, observe, by aid of the microscope, the state of the blood-vessels when inflamed, and see in what manner they are affected by the application of ice to the affected part.

Experiment on a Frog.

The web of the animal's foot was immersed, for half a minute, in water of temperature 110°. It then looked inflamed. The web was forthwith brought into the field of the microscope, and the circulation observed. The blood, in all the capillary vessels, was much redder than natural, had lost its globular appearance,

and moved very slowly. The vessels, themselves, were much dilated.

A piece of ice was now applied to the web for two minutes, after which, the vessels appeared somewhat contracted, and the blood moved more quickly.

By a second application of the ice for the same time, the vessels became smaller, and the motion of the blood was yet more quickened. At the end of twenty minutes, by repeated applications of the ice, the blood circulated, with its natural degree of quickness, in the capillary vessels, and the web ceased to appear inflamed.

I found, by trying the same experiment of scalding the foot of other frogs in warm water, without assisting the cure by the application of ice, that several days were required to elapse before the inflammation, thus produced, ceased.

Now, it must be evident, that the ice, in such experiments as that above detailed, acts by producing contraction of the dilated vessels, by pushing onward, in a faster stream, the slow moving blood, and finally, by restoring the tone of the weakened vessels. And in what other manner can we suppose it to act, in the cases of affection of the head, to which I have been now drawing the attention of the reader? My reply is, in no other; for in these cases, the vessels of the head are, in like manner, congested and dilated, and consequently pouring out their contents, in the form of serous effusion; and, in like manner, the ice, in these affections of the head, as in the web of the frog, produces an increase of tone in the dilated vessels, which is followed by their contraction, and a consequent quicker motion of the blood; by which means, the healthy function of the part is, by degrees, restored.

It will be manifest to the reader, that it has not been my intention, in these remarks, to enter into a general detail of the treatment of the cases we have been considering, and more especially that of the digestive organs, which claims the strictest attention. My wish has rather been, to attract the notice of the reader to one very powerful means of relief, and to explain its operation. At the same time, I feel called upon to state, that it will be vain, in a complicated affection, such as we have been examining, to endeavour to subdue the cerebral affection, if we do not, at the same time, diligently employ such measures as are calculated to improve the morbid state of the abdominal viscera, and to bring about a healthy condition of those important secretions, which are afforded by the chylopoietic organs.

ARTICLE VII.

On the use of the Unguentum Argenti Nitratis, in certain morbid conditions of the Cornea.

BY MR. MIDDLEMORE,

Assistant Surgeon to the Birmingham Eye Infirmary.

In my first report of the diseases treated at the Birmingham eye infirmary, inserted in the Midland Reporter for February, 1830, I stated that the unguentum argenti nitratis, had been very successfully employed in cases of acute ophthalmia, attended with purulent secretion, and that it had also been used with advantage in that condition of the cornea usually termed vascular. At that period, my experience of its value was so far limited, that I did not feel myself justified in pronouncing any opinion respecting its probable utility, in many other forms of ophthalmic disease, to which it was my intention to ascertain, as soon as opportunities presented, its adaptation or unfitness. Having, however, been anticipated in my views, with regard to the acute forms of disease, I directed my chief attention to its employment in, and influence upon, those chronic maladies, which, according to established routine, were generally of a most tedious duration, and more particularly to the various affections of the cornea.

Leucoma, and dense opacity of the cornea.—Sometimes the cornea may be the seat of leucoma, which may or may not be combined with synechia anterior; and if this leucomatous state of the cornea be very extensive, or unusually dense, the power of vision will be very generally limited to an indistinct perception of light, and, in other instances, vision will be totally destroyed. In such cases, the iris will be frequently uninjured, and the deep-seated textures unimpaired, and the retina quite capable of performing its proper function, if the opake condition of the cornea did not prevent the transmission of light. It is, therefore, a point of the utmost importance, to remove this opake state of the cornea with as much speed as possible; but, in many of these cases, the oxymuriate drops, and the various stimulants usually employed for this purpose, either fail to remove it altogether, or do so only partially, after the lapse of a very long period. In these instances, I have witnessed the most surprising results, from the application of the nitrate of silver ointment, used daily, or every other day, according to the effect it produces. Many persons, who had relinquished all hope of recovering any useful degree of vision, and who, according to the ordinary modes of treatment, would scarcely, under the most favourable circumstances, have discovered any increase of vision, after one or two years attendance, have been partially restored to sight in as many months; and in the space of five or six months, the leucoma has entirely disappeared, except at that point where the ulceration of the cornea, producing the leucoma, had extended through the whole, or nearly the whole, of its layers.

If this leucomatous condition of the cornea, or a state of simple opacity of the cornea, (always presuming that the corneal opacity be very extensive, and of considerable density,) be connected with an enlargement of vessels, which enlargement may be confined to its conjunctival covering, or may form the ostensible vascular organization of the substance constituting the opacity or leucoma, and may be therefore more deeply situated; the same mode of treatment is equally applicable, and will be equally successful. When either of these states of the cornea occurs as the result of purulent ophthalmia, the chances of success will be still greater, on account of the comparatively short period which has elapsed since the new substance, constituting the opacity, has been deposited and organized, and the greater activity of absorption at that early period of life.

Pannus.—There is yet another state of the cornea, in which the application of the nitrate of silver ointment is calculated to render the most important service; I allude to that thickened, opake, and vascular state of its conjunctival covering, usually termed pannus. This condition of the mucous covering of the cornea, is frequently combined with, and produced by, a vascular and granular, or (what is more infrequent,) a cutaneous state of the palpebral conjunctiva; but, whether this condition of the palpebral conjunctiva be present or otherwise, whether the mucous covering of the cornea be merely thickened and rendered opake, or, in addition to this thickened and opake state be also vascular, the use of the nitrate of silver ointment is equally called for, and promises the most speedy and material relief. Of course it would be desirable to cure any defect requiring operation for its removal, which appeared to be maintaining and increasing this morbid condition of the cornea, before having recourse to the ointment; for instance, there may be an incurvation of the tarsal cartilage, an irregularity in the growth of one or more of the eye-lashes, or an inversion of the whole of the eye-lashes, from their unnatural position at the *inner* border of the tarsal margin, which having produced the alteration in the translucency of the cornea, to which I am now adverting, it would be advisable, indeed, indispensibly requisite, to remove, as a preliminary measure to the adoption of any curative plan of treatment whatever. But the mere removal of this defective condition of the tarsal cartilage, the integuments of the eye-lids, or the direction of the eye-lashes, will not be sufficient to restore the translucency of the cornea; and it is with a view of curing the effects any one of these conditions may have produced, and which the mere removal of the cause which produced them, will not accomplish, that the present plan of treatment is proposed.

I shall now briefly relate two cases, in illustration of my previous statement, and conclude my remarks upon this subject, by a short exposition of the best mode of applying the nitrate of silver ointment, and subjoin the most approved formula for its preparation.

Simple opacity of the cornea, consequent on strumous corneitis.—James Davis, æt. 13, applied at the infirmary in February, under the following circumstances. He had been, according to the statement of his friends, the subject of severe inflammation of the eyes for many years, which was attended with an inability to face the light, during which time, he had been under the care of various surgeons, who had invariably failed to do more than afford him the most temporary relief. Owing to the long continuance of the disease, his sight was quite destroyed, and he had been led about by one of his sisters for many months, when some person requested his father to take him to the eye infirmary.

State of the eye when he first applied at the infirmary.—Right eye, large and dense opacity of the cornea; left eye, opacity of the entire cornea; indeed, so large and dense was the opacity of each cornea, that the case seemed quite hopeless, but, at the earnest request of his friends, arrangements were made for his attendance, more with a view of satisfying their minds, than with any expectation of restoring the child's vision. As it is unnecessary to detail the gradual progress of the cure, I will merely mention, that by a steady perseverance in the use of the ointment, his sight was so far restored in two months, that he was enabled to walk without assistance, and will soon be in a condition to follow any kind of employment not requiring the most minute and perfect vision. The treatment of this case was occasionally interrupted by slight attacks of ophthalmia, requiring, however, for their removal, merely a suspension of the use of the nitrate of silver ointment, and the administration of a little aperient medicine.

Thickening opacity and vascularity of the conjunctival covering of the cornea.—Caroline Horton, æt. 8, was sent to me by my friend, Dr. Darwall, on the 13th of June, with a thickened, opake, and vascular state of the conjunctival covering of the cornea, which had been produced by chronic disease, and had entirely obscured the iris, and totally destroyed vision. As there was no acute inflammation present, I applied the ointment without delay, and by continuing its use every other day, for a month, accompanying its employment with the occasional application of a blister, and a little purgative medicine, her vision was in a great measure restored. I am fully justified in stating that, had I seen this child three or four years ago, I should have considered it most improbable, that any measures, however perseveringly employed, would have procured for her, her present degree of sight; and that many months must have elapsed, before any remedies, then known, would have produced any appreciable change of vision. Let me further add, that this poor girl, (whose father is a ribbon weaver at Coventry,) had been under the care of several medical gentlemen, and had also been living at the Southam infirmary for many weeks, without deriving any benefit from the measures they adopted; and that when her father brought her to Birmingham, at the expense and recommendation

of the Rev. Mr. Hook, he had no expectation that any plan of treatment would restore his child from a state of absolute blindness.

Directions for the use of the ointment.—Having placed a portion of the ointment, about as large as a small split pea, upon the blunt extremity of a probe, take hold of a few of the eyelashes, and a portion of the surrounding skin, and elevate and slightly avert, the upper lid; then direct the patient to look downwards, smear the ointment upon the upper part of the eyeball, and withdraw the probe on the temporal side of the eye; in this way the ointment becomes thoroughly dissolved and equally diffused over the whole of the corneal surface.

Formula.—℞ Argent nitratis, gr. v. Liq. plumbi acetatis, gtt. xv. Ung. cetacei, 3i. Misce.

Of course it is highly important, that this ointment should be most carefully prepared, and that the various substances of which it is composed, should be accurately and thoroughly blended; and that the nitrate of silver should be reduced to an impalpable powder, before it is mixed with the spermaceti ointment.

The above formula is copied from the infirmary pharmacopæia, but I usually employ only two grains of the nitrate of silver to the drachm of ointment, in my private practice, at first, gradually increasing the quantity to five, six, and even seven grains, after the eye has become accustomed to its use. It should not be used after it has been prepared for a longer period than 12 or 14 days.

ARTICLE VIII.

An account of a remarkable change in the appearance of a TAPE WORM.

BY E. BARLOW, M. D.

One of the Physicians of the Bath Hospital, &c. &c. &c.

To the Editor of the Midland Medical and Surgical Reporter.

THE following communication may be interesting to those whose attention has been directed to the subject of intestinal worms.

The natural history of the tænia, seems to have been hitherto but imperfectly understood. All the accounts and descriptions, apply to the worm as it appears when expelled from the body, yet there is reason to believe that the form and condition in the living state, are essentially different from what has been represented, and that this state has hitherto eluded the observation both of naturalists and physicians.

About a year ago, the following circumstance occurred to me: when about to leave the Bath united hospital, one day, one of the nurses hastened to shew me a worm, just voided at stool, by a patient under discipline for acute rheumatism. It was such as I

had never seen, being about five inches long, dark coloured, flatted, yet with a convexity of surface; marked throughout with minute rings, gently swelling from the head to the body, and then gradually diminishing to the tail. Pressed for time, I directed it to be laid aside until the next day, and, for security, I saw it deposited in one of the bleeding porringers, covering it with water to prevent injury from desiccation, and consigning it to the special care of the apothecary's assistant.

On examining the porringer next morning, I found, to my astonishment, not the worm of the preceding day, such as I have described, but a large mass of unfolded tape worm, white, flat, jointed, and in all respects such as patients so often exhibit to their medical attendants after the successful operation of a vermifuge.

My first impression was an unpleasant feeling of my own ignorance. I could not imagine but that I must have overlooked what naturalists had recorded, for it never occurred to me that a fact such as I witnessed, could be unknown or unnoticed. My first resolve, therefore, was to supply my own deficiency, in full confidence that I should readily find the information I wished. My research, however, was vain, for I could no where find descriptions or delineations of tænia, but such as applied solely to the unfolded worm. Thus disappointed, my next procedure was to make a drawing of the worm from memory, and to send this, together with a written account of the circumstance, to an intelligent friend well versed in natural history. But in this, too, I failed, for he could give me no additional information.

I would have afterwards called attention to the subject, by reporting the facts to some medical journal, but my original statement had been mislaid by the friend to whom I submitted it, and I had not leisure at the time, for drawing it up afresh. It continued to occupy my thoughts, however, and I only awaited opportunity to make further enquiries. Perceiving, subsequently, in Dr. Hodgkin's catalogue of the museum at St. Thomas's hospital, that he had paid attention to the subject of worms, it occurred to me to communicate with him; and I accordingly sent him a full and accurate account of what I had witnessed, accompanied with a drawing, and with such remarks as the occasion suggested. Of this communication I took no copy, which I now regret, as it would have saved me trouble in the present instance, and was, if I recollect, rather more full than the brief sketch which I now present. It would gratify me to introduce here the Doctor's polite and interesting reply, but as it was a private communication, I do not feel myself at liberty to make such use of it without his express consent. One sentence only shall I extract, as tending to verify my statement, by shewing that the same fact had been observed by another living witness.

"On mentioning the circumstance to my friend, Dr. Addison, he told me that he once took from a dead subject, a worm in the

state described by thee, and that having left it, a similar transformation took place." The confirmation of the fact, supplied by Dr. Addison's evidence, is valuable, and, perhaps, two such instances, separately observed and positively attested, might suffice to establish its truth. If the fact be admitted as proved, I see not how we can conclude otherwise, than that the form which I have described, exhibits the living state of the worm, and that elongation takes place only when vitality is destroyed. That the contracted and elongated states are both natural to the living worm, I cannot conceive, and my persuasion is, that once elongated, the worm could never again contract so as to recover the form which I witnessed. Bremser, as I understand, has mentioned contracted and elongated states, without noticing further distinction, from which it is clear to me, that he referred only to different degrees of elongation in the dead worm, for that which, according to my view, is the living worm, has no resemblance whatever to the dead one, and could never be confounded with it, neither could any naturalist represent it as being the elongated worm in a contracted state, unless he were, at the same time, prepared to describe the extraordinary change recorded in this paper, which Bremser has not done. The subject may appear insignificant, yet truth is always worthy of being ascertained. If the facts be as I believe, then are there many errors in the prevailing notions respecting tænia, that require to be corrected. If what I represent be true, and the conclusion, as to the living and dead states of the worm, correct, it is most extraordinary by what power of inanimate matter such complete unfolding, as I witnessed, could be effected. Simple elasticity is the only such power I know. That vital power should counteract elasticity during life, is easily conceived, but the exercise of this to such an extent after death, appears to me quite unexampled.

My object in troubling you with this crude notice, is to call attention to the fact, so as to multiply observers. It can hardly be but that opportunities of witnessing it will recur, but they must be watched, as they are peculiarly liable to be overlooked, for no one meeting with the living worm, and ignorant of its nature, could imagine it to be tænia. It might thus be thrown aside, and the transformation escape notice. In the instance which occurred to me, the change was complete in about twenty hours, but how much within that time, I am unable to say. An additional motive with me for sending this brief communication at the present time to the Midland Reporter, is the wish to evince my cordial approval of the useful undertaking in which you are engaged.

ARTICLE IX.

Quarterly Reports of the Worcester Dispensary.

BY ROBERT I. N. STREETEN, M. D., WORCESTER.

1830. FIRST QUARTER. JANUARY TO MARCH.

	Canal.	*Sev.*	*City.*	*Sub.*	*Coun.*	*Tot.*
Abscess,	2					2
Anasarca,	1	1				2
Anthrax,				1		1
Ascites,			1			1
Asthma,	1					1
Bronchitis,	7	3	19	5	1	40
Bronchocele,	2					2
Burns and Scalds,		1		1		2
Cataract,	1					1
Cephalalgia,	2	2	1	1		6
Chlorosis,				1		1
Chorea,			1			1
Constipation,	1		1			2
Cynanche Tonsillaris,	1		1			2
Diarrhœa,	1		1			2
Diseased Heart,					1	1
Diseased Joints,	1	1	1			3
Diseased Spine,	2					2
Dyspepsia,	5	4	9	3	4	25
Dyspnœa,	1					1
Epilepsy,					1	1
Eruptive Disease,	1					1
Erysipelas,	1		2			3
Exostosis,	1					1
Fever,	7	3	6	4		20
Gastrodynia,		1			1	2
Hæmoptysis,	1		1			2
Hæmorrhois,	1	2				3
Hematemesis,			1			1
Hepatitis,	2		3			5
Hydrops	1					1
Hydrops Ovarii,			1	1		2
Hydrothorax,			2	2		4
Hysteria,				1		1
Inflamed Rectum,			1			1
Lepra,	2					2
Leucorrhœa,		2	1			3
Lumbago and Sciatica,	2		2			4
Marasmus,				1		1
Meningitis,			2	2		4
Menorrhagia,	1		1			2
Midwifery case,		1				1
Nephritis,	1					1
Ophthalmia,			2			2
Otorrhœa,					1	1
Paralysis,	1		1			2
Peritonitis,	2	1	1	1		5
Peritonitis Puerperal,	1					1
Phthisis,	7	5	10	4		26
Pleuritis,	3		3	2		8
Pneumonia,			1	2		3
Prolapsus Ani,		1				1
Prurigo,		1				1
Psoas Abscess,				1		1
Rheumatism,	3	3	4	1		11
Scrophula,				1		1
Syphilis,	3				1	4

	Canal.	*Sev.*	*City.*	*Sub.*	*Coun.*	*Tot.*
Tabes Mesenterica, ...	1					1
Ulcer,...	2	1	1	2		6
Unknown, ...	2					2
Total, ...	74	38	81	37	10	240

Deaths, 15; seven from phthisis, two from bronchitis, two from hydrothorax, one from a burn, one from fever, one from paralysis, and one from peritonitis.

Re-admissions from last quarter, 18, one of which, a case of phthisis, terminated fatally.

1830. SECOND QUARTER. APRIL TO JUNE.

Abortus, ...			2			2
Aneurism of the Aorta, ...			1			1
Ascarides, ...			1			1
Ascites, ...	1					1
Bronchitis, ...	1		5	2		8
Bronchocele, ...		1				1
Cancer Uteri, ...			1			1
Cephalalgia, ...			1	2	1	4
Cynanche Tonsillaris, ...		1				1
Diarrhœa, ...			1			1
Diseased Heart, ...	1		1			2
Diseased Joints, ...	2		1			3
Dysentery, ...				1		1
Dyspepsia, ...	2	4	9	3	5	23
Dyspnœa, ...		1				1
Dysuria, ...			1			1
Enlarged Sub-Maxillary Gland, ...			1			1
Enteritis, ...			1			1
Enuresis, ...			1			1
Erythema, ...					1	1
Fever, ...	6	8	2	5		21
Fever, infantil. rem.	1					1
Fever, remittent, ...		1				1
Fistula in Ano, ...	1					1
Fracture, ...		1				1
Gonorrhœa, ...			1			1
Hæmoptysis, ...	1		1			2
Hematemesis,...	1			1		2
Hepatitis, ...	3	1	1			5
Hernia, ...	1					1
Hernia Humoralis, ...			1			1
Hydrocele, ...				1		1
Hydrocephalus, ...	1					1
Hydrothorax, ...	1		1			2
Inflamed Mamma, ...			1			1
Leucorrhœa, ...		1				1
Menorrhagia, ...		2	1		1	4
Nephritis, ...	1					1
Neuralgia facialis, ...	1					1
Ophthalmia, ...			1	1	1	3
Palpitatio, ...				1		1
Peritonitis, ...				1		1
Phlegmasia dolens, ...			1			1
Phlegmon, ...	1				1	2
Phthisis, ...	5	2	15	4		26
Phthisis laryngealis, ...				1		1
Pleuritis, ...	2		1	1	1	5
Pneumonia, ...		1				1
Psoas Abscess, ...	1		1			2
Rheumatism, ...	1		2	2		5
Syphilis, ...	1	1		1		3
Tinea Capitis, ...			1			1
Ulcer, ...		1				1
Wounds and Contusions, ...	1	1				2
Unknown, ...	2					2
Total, ...	39	27	58	27	11	162

Deaths 7; five from phthisis, one from fever, and one from hematemesis.

Re-admissions from last quarter, 32, two of which, both cases of phthisis, had a fatal termination.

Tabular view of the prevalence of Fever, Bronchitis, Phthisis, and Dyspepsia, in the several Districts.

1st.—FEVER.

	Total.	*1st Qr.*	*2nd Qr.*	*Canal.*	*Sev.*	*City.*	*Sub.*	*Coun.*
Cases of Fever,.....	41	20	21	13	11	8	9	0
Total Cases, ...402		240	162	113	65	139	64	21
Proportions, 1 in 9.80		12.00	7.71	8.69	5.91	17.37	7.11	—

Deaths, 2.—1 in 20½.

2nd.—BRONCHITIS.

	Total.	*1st Qr.*	*2nd Qr.*	*Canal.*	*Sev.*	*City.*	*Sub.*	*Coun.*
Cases of Bronchitis, 48		40	8	8	8	24	7	1
Total Cases, ...402		240	162	113	65	139	64	21
Proportions, 1 in 8.37		6·00	20.25	14.12	8.12	5.79	9.14	21.00

Deaths, 2.—1 in 24.

3rd.—PHTHISIS.

	Total.	*1st Qr.*	*2nd Qr.*	*Canal.*	*Sev.*	*City.*	*Sub.*	*Coun.*
Cases of Phthisis,... 52		26	26	12	7	25	8	0
Total Cases, ...402		240	162	113	65	139	64	21
Proportions, 1 in 7.73		9.23	6.23	9.42	9.29	5.56	8.00	—

Deaths, 12.—1 in 4⅛

4th.—DYSPEPSIA.

	Total.	*1st Qr.*	*2nd Qr.*	*Canal.*	*Sev.*	*City.*	*Sub.*	*Coun.*
Cases of Dyspepsia, 48		25	23	7	8	18	6	9
Total Cases, ...402		240	162	113	65	139	64	21
Proportions, 1 in 8.37		9.60	7.05	16.14	8.12	7 72	10.67	2.33

Deaths, none.

Fever.—The fever of this period was most prevalent in the Canal and Severn districts, and in those parts of the suburbs adjoining to them. Most of the cases could be traced to the operation of exhalations arising from stagnant waters, or foul drains; at least, wherever the fever occurred, as far as my own observation went, these causes were found to exist. The inhabitants of a row of houses in St. Clement's gardens, were particularly subjected to the febrile action, scarcely an individual escaping. They were all exposed to the same morbific cause, a row of privies being situated close to the back doors of the houses, with a drain, in a very bad state, running the whole length. It is probable that, under circumstances favourable to the generation of contagion, fever, which, in its origin, may be traced to the operation of vegetable miasmata, ultimately becomes capable of propagating itself from the bodies, or discharges, of those labouring under it. There was, however, notwithstanding its prevalence in that particular spot, no distinct evidence of contagion since, though other cases did occur in the neighbourhood, they could not be traced to have arisen in consequence of any communication with the fever existing there, and shewed no tendency to spread from one individual to another

The disease proved extremely severe amongst children, the head being much affected at the outset, while there was high excitement, both of the nervous and sanguiferous systems. One

case in the locality above mentioned, though not a patient at the dispensary, was saved only through the most vigorous measures in the onset. The two fatal cases both occurred in children. One of them was that of a girl residing in the city, but near the banks of the Severn; she was moribund when admitted. The other, which arose in Lowesmoor, in the very focus of malaria, had been allowed to run on unchecked for a month, and when seen, was also quite in a hopeless state.

Bronchitis.—The cases of bronchitis, forty-eight in number, are illustrative of remarks which have formerly been made; viz. the great prevalence of this disease in the first quarter, as compared with the second, and in the city district, over all others. There was, however, some difference in the effect of the employment of the sufferers, twenty-nine, or about three-fifths of the whole number, being engaged in active occupations, and consequently exposed to the vicissitudes of the weather, whereas, in previous instances, those engaged in the glove trade, and other sedentary employments, were found most liable to the disease. The effect of cold in inducing bronchial inflammation, is sufficiently shewn, by the constant prevalence of this disorder in the winter months. In ordinary seasons, this cause probably acts chiefly upon those who are only partially exposed to its operation, and, at the same time, predisposed to the disease from other causes; whence it arises, that those whose occupations are of a sedentary nature, may, under such circumstances, be more liable to be affected, than those who are engaged in employments which take them without the house. But, the severity of the winter of 1829-30, seems to have acted generally upon all who were exposed to its influence, and, accordingly, those persons who, from the nature of their avocations, were most exposed to the action of the cold, were most liable to be attacked by this disease.

Phthisis.—The great prevalence of tuberculous consumption in this city, and the hopeless nature of many of the cases, becomes a source of the most serious consideration. The number of cases occurring during the six months, was greater than at any former period since the publication of these reports; but the deaths, though numerous, were in a diminished proportion, the increase of the mortality from this disease being relatively less than the increase of the numbers of those suffering from it. Twenty-one, of the fifty-two cases, occurred in males; thirty-one in females; the deaths being four, or one in thirteen, of the females, and eight, or one in two, and about three-fifths of the males. Four of the cases were attended with hæmoptysis, in two of which, the bleeding was restrained by the ordinary astringents, and perfect rest; in one, it was checked by the acetate of lead; the fourth case resisted every measure, and ultimately proved fatal. The subject of one of the fatal cases, was attacked with violent epistaxis, which, though at length controuled, left the patient in so debilitated a state, that he sunk in the course of two days from its occurrence.

Of those cases which fell under my own observation, several were considerabiy benefitted, and two were completely restored to health. The measures chiefly had recourse to, were occasional local bleedings, counter irritation by blisters and tartar emetic ointment, stimulating liniments externally, and internally, sedatives and anodynes, and, sometimes, alterative doses of mercury. The effect of this last remedy seemed at first very encouraging, in several instances, and it is worthy of remark, that in both the cases in which a complete recovery took place, this treatment was followed. In all, the tongue cleaned under the use of the alterative, the appetite improved, and, for a time, the symptoms, generally, were relieved. In some of the cases, however, in which this remedy was given, though the relief was decided at first, the debility subsequently increased, and the pectoral symptoms appeared to make more rapid progress after a time, so that it is doubtful whether any real benefit was obtained.

Dyspepsia.—The sufferers from this disease, were, as usual, chiefly females, only six out of forty-eight, or one-eighth of the whole number, being males. Their employments were mostly sedentary, or such as confined them to the house. In addition to these cases, there were ten of cephalalgia, and two of gastrodynia, which should, perhaps, be classed under the same head, as they obviously arose from a disordered state of the digestive apparatus, and were induced by similar causes. Of these, ten occurred in females, the majority of whom were engaged in glove sewing, or other sedentary avocations.

The diseases of most frequent occurrence after the foregoing, were rheumatism, pleuritis, and hepatitis; the two former obviously owing to the severity of the season, and were much more prevalent during the first quarter, than during the second. The cases of hepatitis were chiefly of a chronic nature, connected more or less with a diseased state of the digestive organs, of considerable standing, and arising from similar causes with those productive of dyspepsia, in its more general and undefined sense.

The case of hysteria was interesting, from its obvious dependence upon irritation existing at the roots of the spinal nerves. It was characterized by excessive debility, and symptoms simulating angina pectoris, in addition to the ordinary signs of the disease. Upon examination of the spine, considerable pain was experienced on pressure over the inferior cervical, and superior dorsal vertebræ. Leeches, blisters, and tartar emetic ointment, were applied, in succession, to the affected portion of the spine; and she took the carbonate of iron in large doses. The tenderness of the spine subsided, and the hysteric and other symptoms, gradually gave way under this treatment. She was then recommended to go into the country, and has subsequently remained free from complaint.

ARTICLE X.

Observations on the last half-yearly Report of the Birmingham Eye Infirmary.

BY MR. MIDDLEMORE,

Assistantant Surgeon to the Infirmary.

[CONCLUDED.]

Remarks on the utility of Strychnia, in certain forms of Amaurosis.

[CONTINUED FROM PAGE 485, VOL. II.]

On account of this disposition of the retina to remain in a permanent condition of inaction, when unaccustomed for a long time to the influence of its natural stimulus, it has been recommended on high authority, to remove a cataract from one eye, when fully formed, when its fellow is perfectly healthy; apparently forgetting that the retina of an eye so circumstanced, is by no means in the same unexcited state as that nervous expansion in the eyes of a patient affected with congenital cataract. For, if one eye only be affected with cataract, (not congenital,) the other eye remaining perfectly healthy, the action of light upon the retina of the sound organ, will produce a sympathetic impression to a certain extent, upon the other, and thus preserve its susceptibility, though in a diminished degree; whereas, in the case of congenital cataract affecting both eyes, the retina has never been fully and perfectly impressed with the stimulus of light, and its susceptibility gradually diminished on the one hand, whilst its stimulus declines on the other; the declension of stimulus arising from the increasing density and opacity of the cataract, and the diminution of susceptibility being dependant on the inactive state of the retina, increased by the gradually diminishing quantity of light transmitted through the humors of the eye, from the cause to which we have just adverted.

It has been said that, if a mature cataract be allowed to remain in one eye, it disposes that organ to become amaurotic, and has a tendency to excite a similar disease in its fellow; and whilst it limits the sphere of vision, it weakens the opposite organ by the undivided labour it obliges it to sustain. As I have never had the slightest reason to believe that an opake condition of one lens, possesses in itself any capability of exciting a similar state in the lens of the opposite eye, and as my attention has been particularly directed to the investigation and elucidation of this circumstance, I must refuse my assent to this doctrine, until future observation has increased our knowledge upon this point.

With regard to the other objections, I will merely observe, that whenever one eye only has been affected with cataract, which has not been congenital, nor produced by accident, the vision of that eye has been generally restored by an operation, however

long the cataract may have existed; or, rather, the retina has, after such operation, indicated its capacity to be properly excited by its natural stimulus. Of course I am presuming that the operation has been judiciously adopted and properly performed, and that no effects injurious or destructive to vision, have been produced by the operation. If congenital cataracts had been permitted to exist for the same number of years, as in the cases now referred to (though not detailed,) from my notes, and which have furnished me with the data for my present opinions, the degree of success consequent on the performance of an operation for their removal, would have been much less considerable, and, in many instances, judging from the result of operations undertaken for the cure of congenital cataracts, upon patients at the age of ten and upwards, no vision whatever would have been restored.

From these remarks, and from opinions formed after the maturest deliberation, I would deduce the following conclusions; and 1st, that although the retina in the case of congenital cataract affecting both eyes, is likely to remain in a permanently atonic state, if the opake lens be not removed at an early period of life, yet the same condition of retina is not likely to be produced by the existence of cataract in one eye, for an equal number of years. 2nd, that experience does not warrant a belief, that the existence of an opake lens in one eye, has a tendency to excite a similar disease in the opposite organ. 3rd, that so long as the sight of one eye remains perfect, the field of vision is sufficiently extensive for every useful purpose; and lastly, that in many persons who have lost the power of vision with one eye, the sight of the remaining eye has continued with the same, or nearly the same, degree of vigour, as under ordinary circumstances.

Wound of the Eye-ball.

The following case has very recently fallen under my notice, and as it is somewhat similar to one related at an early part of a former number of your Journal, and is also strongly illustrative of the opinions there expressed and maintained, I am desirous of stating its chief characters.

Isaac Pearce, æt. 14, was shot in the right eye on the 30th of December, 1830, and was seen soon after the accident, by Mr. Spilsbury, of Walsall, who informs me that the chambers of the eye were, at that time, full of blood, and that there existed a small aperture in the sclerotica, immediately behind its junction with the cornea, through which, he believes, one of the shots had penetrated the globe; as the blood became absorbed, and the inflammation subsided, the eye became amaurotic, the iris was found to be lacerated, and to have changed its colour in consequence of inflammation. As Mr. Spilsbury did not hold out any hope of the restoration of vision, the lad applied at the Birmingham eye infirmary, where I first saw him; it was then six weeks from the time of the accident; the condition of the eye was, at

that period, such as has been described, except that the sclerotica had acquired a bluish tinge, as though it had been so far attenuated by absorption, that the choroid might be partially seen through it. There was no inflammation present, and as the wound through which the shot had penetrated the globe had quite healed, and as the amaurosis was complete, there did not appear to be any indication for active treatment, more especially as the translucency of the humours was unimpaired; it appeared to Mr. Spilsbury as well as to myself, that the pressure of the shot upon the retina, combined with the probable injury to the ciliary nerves in its passage through the sclerotica and choroid, had produced the loss of vision from which he was suffering.

There can be no doubt that, in this case, the shot was resting upon the retina, and had acquired, or was acquiring, a cyst, through the medium of the formative function of the surrounding parts, and that it would neither become changed so as to expose it to the agency of the absorbents, nor discharged by ulcerative absorption. This latter opinion is the more probable, from the total absence of all irritation and inflammation; and the little disposition possessed by the sclerotica to undergo that process favourable to the discharge of a foreign substance.

A substance of this description, is more liable than any other to become encysted, for a variety of reasons; and first, its size, minute substances being more easily and more generally absorbed in the eye, than larger ones; secondly, its form, a round body, having a smooth surface, is less capable of producing irritation than substances possessing roughness and angularity; thirdly, its composition, lead, under such circumstances, is less capable than many other metals, of being affected by those chemical changes which are essential to that alteration of its qualities, by which alone it can be taken away by the absorbents; and, perhaps, it may be fairly added, that the selecting power of those vessels would dispose them to offer a certain amount of resistance to the admission of a substance, so inimical to the constitution of which they form a part.

Circumstances which modify the apparent magnitude of the Eye-ball.

There have been recently brought to the infirmary, two infants, in whom the eye on one side has been much smaller than its fellow, without appearing to be otherwise defective. In one case, the eye was not larger than a good sized pea, and in the other instance, it was a degree larger, the opposite organ in each case, being of a proper size and natural form; but the infants were too young to enable me to ascertain, whether or not they possessed the faculty of vision with these diminutive eyes.

The comparative magnitude of the eye in different persons, is very often incorrectly estimated; and it appears to me that the following circumstances, which materially modify the apparent magnitude of this organ, on a superficial examination, are fre-

quently overlooked, particularly by students. 1st. The deposition of fat within the orbit, or the structure of the orbit and surrounding parts, by which the eye is thrust forward so as to be more prominently situated than usual. 2nd. The length of the intertarsal slit; if the opening between the lids be smaller than ordinary, in consequence of the shortness of the intertarsal slit, the eye will appear to be diminutive, owing to a small portion only of its sphere being exposed to view. 3rd. The extent to which the conjunctiva proceeds along the tarsus, before it is reflected upon the globe of the eye; if it pass far backwards before it is reflected upon the globe, a large portion of the eye-ball will be seen in its ordinary movements, and on separating the lids, a great part of its sphere may be exposed to view, yielding an appearance to those unacquainted with this fact, of greater comparative magnitude than the organ actually possesses. 4th. The size of the cornea compared with that of the globe; for although the magnitude of these parts is generally relatively equal, yet, in some instances, there is a considerable disproportion in this respect, and if in such case we were to infer the magnitude of the eye-ball from the dimensions of the cornea, our estimate would be extremely inaccurate.

ARTICLE XI.

The Anniversary Dinner of the Birmingham School of Medicine and Surgery.

The anniversary dinner given by the Students of the Birmingham School of Medicine to their Lecturers, was held at Dee's Royal Hotel, on Saturday, the 4th of June. E. Johnstone, M. D. presided on the occasion, supported by E. T. Cox, Esq. as Vice-President. After the usual loyal and patriotic toasts had been enthusiastically drunk, the president proposed,

Success to the Birmingham School of Medicine and Surgery, and health to W. S. Cox, Esq. its founder, (which was received with long-continued and most enthusiastic applause.)

In proposing this toast, the president made the following remarks: He commenced with the history of the formation of the school; he stated that it owed its origin to the perseverance and industry of Mr. W. S. Cox; that that gentleman, after the completion of his studies, under the lamented Edward Grainger, in 1824, visited Paris, for the express purpose of preparing himself to deliver lectures on anatomy and surgery; that his inaugural lecture was delivered in the presence of some of the most influential individuals in this town, in 1825; that he visited, in 1826, the school established at Manchester, and, in the introductory lecture of that year, strongly pointed out the necessity and importance of forming a similar institution in this town. In the year 1827, at the conclusion of his course, to obtain information for the accomplishment of this object, he visited the schools of Liverpool, Glasgow, Edinburgh, and Dublin. In the year 1828, his plans were submitted to the leading professional men. The subject was warmly taken up by Dr. Pearson, Dr. Booth, and Dr. Eccles, and through their

exertions, the institution, the foundation of which they were this day met to celebrate, was brought into action. In the first instance, Dr. J. Johnstone and Dr. Male, were invited to deliver the lectures on medicine, which they declined. Dr. Booth, as the next in seniority, accepted the offer, and, at the same time, Dr. De'lys was invited to co-operate with him. Mr. Wood, Mr. Vaux, and Mr. Hodgson, were respectively solicited to take the surgical department. Dr. Eccles, as senior physician to the dispensary, accepted the joint lectureship on materia medica, with Dr. Pearson. Midwifery was offered to Mr. Blount; afterwards accepted by Mr. Ingleby. Chemistry to Mr. Phillips; afterwards accepted by Mr. Woolrich. The plan was submitted to the public, and honoured by the most distinguished patronage; and on the first of November, 1828, the school opened by a luminous and interesting discourse by Dr. Pearson. The physicians of the General Hospital liberally threw open their practice to the pupils without fee; and the same advantages were held out by the physicians of the Dispensary. Since which period, botanical lectures have been established, and ably delivered by Mr. Knowles. Dr. Davies has been appointed lecturer on medical jurisprudence. Prize medals have been offered to the students by the lecturers; a library has been formed for their use, and a museum of anatomy. Such, gentlemen, is the origin of the school. The president then proceeded to remark, that some of the most useful and eminent of the schools of medicine, had originated from the exertions of private individuals; that the celebrated Monro, and the first teachers at Edinburgh, had formed their plan, and given their lectures, before they had been adopted as professors by the university. Considering the central situation of this town, and the advantages offered by the public institutions for the relief of suffering humanity, he saw no reason why the school of medicine should not attain, in progress of time, as much eminence as that, or any other school. (Loud cheers.) Indeed, when he considered the great improvements which had been made in this neighbourhood, and the establishment of the different institutions for the promotion of the arts and sciences, he looked forward to the period when Birmingham would be the seat of a *great commercial and scientific college,* (loud cheers); for the support of which, he considered that the great surplus of the school founded by King Edward VI. and which, in a few years, would take place, might be most aptly applied, especially when it is considered that the surplus arose from the great increase of the town, in consequence of its trade. Success and prosperity to the School of Medicine, and health to W. S. Cox, Esq. its founder, was then drank, amidst enthusiastic applause.

Mr. W. S. Cox (loud and long continued cheers,) replied. After expressing his acknowledgements to the president, for the flattering eulogy he had passed upon him, and for the warm manner in which the toast had been received by the students, he remarked, that he considered that as the proudest day of his life, as they were met to celebrate the foundation of an institution, which had ever been the subject of his anxious hopes and long meditations. He alluded to the enthusiasm with which he had ever been supported by his class, and the ardour and perseverance they displayed in the pursuit of medical knowledge. He urged them not to relax their efforts, but to remember, even after all the exertions of their teachers, in their hands alone was placed the honour and reputation of the school. He had hitherto sacrificed private friendship, pri-

vate interest, and private fortune, but as long as he had health, and as long as he had life, he would not desert his post; (immense applause,) and he looked forward to the time when the school would not only be an honour to its founders, but one of the brightest ornaments of the town. (Long continued cheers.)

The lecturers of the school were then drank. (Great applause.)

Mr. W. S. Cox arose amid loud cheers, and proposed, the health of their president. He observed, he had been emphatically and justly termed the "Father of the Profession." (Loud cheers.) He had ever been the foremost to promote the cause of science and humanity, and had it not been for his almost paternal benevolence, the school of medicine might not have existed. (Cheers.) He alluded to the illiberal opposition which the institution had met with from a particular party, but observed,

"Be all the clouds that lower'd upon our house,
In the deep bosom of the ocean buried."

He concluded by expressing the great obligation the lecturers and students were under to their revered president, for his unceasing sanction and support; and observed, addressing himself to the president, that whilst the school of medicine flourished,

"Semper honos nomenque tuum, laudesque manebunt."

The health of the president was then drank enthusiastically, with three times three, and one cheer more.

After the cheering had subsided, the president rose, and first complimented the students on the advancement they had made in their studies, displayed on several occasions at their public examinations; and after an affectionate address on their duties in a moral point of view, concluded by proposing a premium of ten guineas for the best essay on the anatomy, physiology, and pathology of the ganglionic sytem of nerves, to be awarded by Dr. Pearson, Dr. Eccles, and Mr. W. S. Cox, and presented at the next anniversary dinner. The venerable president was repeatedly interrupted in his address, impressively delivered, by the cheers of the students.

The physicians of the general hospital, with thanks to Dr. John Johnstone and Dr. Boothe, for their clinical lectures. (Applause.)

The surgeons of the general hospital, with thanks to Mr. Hodgson for his clinical lectures on surgery. (Applause.)

The physicians and surgeons of the dispensary, with thanks to Dr. Darwall for his clinical lectures. (Applause.)

The fever hospital, and all other medical institutions. (Applause.)

The president then proposed, the health of Jones Quain, M. B., and lecturer on anatomy, London. He alluded to the impartial manner in which he had conducted the public examination on anatomy and surgery. (Great applause.)

Mr. Quain arose amid loud cheers, and after passing a high encomium on the president, for his expanded and liberal views as a philosopher and philanthropist, addressed his remarks to the students. He complimented them on the accurate knowledge they displayed both in anatomy and surgery, and passed an eulogy on their teacher, with whom he had passed delightful hours in study, and who was bound to him by the firmest ties of friendship. (Cheers.) The establishment of institutions of this kind, he considered to be most important, not only to the profession, but to the public at large. He observed, how absurd it was to suppose that science alone existed within the sound of Bow Bell, and that anatomy could only be taught within the precincts of Southwark, or the purlieus of St. Giles's. (Loud cheers.)

The president proposed, the health of the vice-president, Edward T. Cox, Esq., and prefaced the toast by remarking, that he had aided and brought forward the plan of the school, in an almost similar manner to the father of the first Monro. (Continued cheers.)

The vice-president returned thanks, and commented on the great advancement which had taken place in medical science, since the period he was a pupil at the general hospital. He stated his earnest wish, in every way in his power, to contribute to the interests of the medical students of this town; (cheers,) and concluded by offering a premium of five guineas for the best essay on inguinal hernia, and which, he was proud to state, the most distinguished surgeon of the age, Sir Astley Cooper, had handsomely consented to adjudicate. (Loud cheers.)

Mr. W. S. Cox proposed, success and prosperity to the Webb-street and Aldersgate-street schools. (Applause.)

Mr. Quain returned thanks, and proposed, the health of the students who had obtained prize medals. (Cheers.)

Mr. N. Lloyd, in a short, but feeling address, replied. (Cheers.)

Mr. Knowles proposed, our professional visitors. (Applause.)

Mr. Wickenden, in an animated manner, returned thanks.

ARTICLE XII.

Report of the Worcester Infirmary.

BY MR. HERBERT COLE, HOUSE SURGEON.

The number of patients treated in the Worcester General Infirmary, from the 1st of July, 1830, to the 1st of January, 1831, (exclusive of those previously on the books,) amounted to 582; of these, 239 were medical; 343 surgical cases.—Males, 342; females, 240.—In-patients, 306; out-patients, 276.

General Results.—Cured, 347: relieved, 61; discharged at their own request, 1; for irregularity, 20; dead, 27. Remaining on the books, January 1st, 1831, 126.

Diseases.—Abscess, common, 5; psoas, 1; asthma, 3; amenorrhœa, 12; anomalous, 17; bronchocele, 2; burn, 1; calculus in vesica, 2; cephalalgia, 11; contusion, 35; chorea, 1; club feet, 1; colica pictonum, 1; cutaneous eruptions, 19; cynanche tonsillaris, 5; diarrhœa, 2; dislocation, simple, 4; dropsy of abdomen, 6; general, 3; tunica vaginalis, 2; dyspepsia, 22; eye, diseases of, 18; fever, continued, 9; intermittent, 2; fistula in ano, 3; fracture, simple, of extremities, 27; ribs, 2; compound of extremities, 4; os innominatum, 2; gonorrhœa, 3; hæmorrhage from lungs, 2; bowels, 1; heart, diseases of, 6; hernia, 39; inflammation of bladder, 2; bronchi, 27; intestines, 3; liver, 8; lungs, 18; pleura, 2; stomach, 4; joints, diseases of, 29; leucorrhœa, 7; liver, diseased, 32; menorrhagia, 3; ovarium, diseases of, 1; peritonitis, 6; periostitis, 4; paralysis, 3; paraplegia, 2; paraphymosis, 1; phthisis pulmonalis, 8; prolapsus ani, 1; rheumatism, acute, 9; chronic, 14; scald, 3; schirrus, 4; scrofula, 6; spine, diseases of, 11; stricture of urethra, 1; syphilis, 11; testes, diseased, 7; tabes mesenterica, 1; vertigo, 2; tumors, 10; ulcers, 44; uterus, diseases of, 4; varicose veins, 1; wounds, 38.

Case I.—A large Abscess, situated under the Glutæi Muscles, terminating favourably.

January 29, 1831.—H. C. æt. 21, had the small-pox rather severely about nine weeks ago, from which she recovered slowly. About six weeks ago, when first getting about, she felt frequent shooting pains in the left hip, which were worse when she was in an erect posture than when lying down; she could not sit at all. She soon perceived it begin to appear larger than the opposite hip, with a sensible diminution of the pains. There is, at present, an abscess under the lower portion of the glutæi muscles, and extending half way down the outside of the thigh; it projects most, just below and anterior to the greater trochanter. She was a strong girl before the attack of the small-pox, but is now very much emaciated. Tongue white, with morbidly red edges; alvine evacuations pretty healthy, both in regard to quantity and quality; pulse quick and sharp, but weak; urine scanty, and almost of a red hue.

February 1st.—A small incision made with a lancet, on the most projecting point of the abscess, and about a quart of fetid pus, with clots of blood intermingled, was let out. To quiet the irritation, and strengthen her system, she was ordered ℞ Tinct. opii gtts. x. Quin. sulph. gr. ij. Mist. ros. acid (nosocomii) ℥i. M. ft. haust. 4tis horis sumendus. To have nourishing diet, with Port wine and malt liquor. Edges of the wound brought closely together.

5th.—Edges of the wound not united; oozing of pus from under the plasters, which being removed, about twelve ounces of pus, of the same kind as the last, was evacuated, and the edges of the wound, which had small granulations on them, were brought into close contact. General health much improved; appetite better; gaining flesh.

7th.—Feels much better, but complains that the medicines make her sick, so she is to omit them, and go on with her good diet.

11th.—Abscess re-opened, and about 12 oz. of fluid let out. The sides of the cyst were pressed together by a roller passed round the thigh and lower part of the body.

15th.—The abscess burst last night, and about 14 oz. of inodorous pus came away. She is not quite so well as she was, her appetite having left her.

25th.—Cyst filled again, and re-opened, and about 11 oz. of "laudable pus" let out. A poultice to be applied to the part.

April 1st.—A smaller and smaller quantity of pus has continued to ooze from the last opening, consequently there has been no accumulation. There is now but very little discharge from the part, and she is getting stronger and gaining flesh daily.

27th.—Walks about the ward with a little assistance.

May 15th.—There has not been any discharge from the wound for the last fortnight, and she feels quite well. A person to see her now, who had seen her when she came to the hospital, would with great difficulty recognize the invalid, in the fine red faced girl who left the infirmary to day.

Case II.—Fractured Spine.

May 8, 1831.—R. W. insane, being suffered to go up stairs by himself this evening, he threw himself out of a window on the second floor of a small house, and a man who followed him up, caught hold of his legs, which caused him to fall on his head. He was soon after brought to this hospital. From the forehead to the upper

angle of the occipital bone, there extends a wound penetrating to the pericranium, which is divided in some parts of the wound. No fracture of the skull could be felt. A fracture of the spine had happened about the upper dorsal vertebræ, but below the cervical; at least, no serious injury had been done to the cord, above where the nerves supplying the axillary plexus and the respiratory nerves arise, as he could move, and feel a pinch, or prick of a pin, in the upper extremities, and he breathed easily. There was no sensation in the lower extremities, or the parietes of the abdomen. He had priapism; pulse quick, but laboured; edges of the wound of the head brought together by adhesive strips. He was laid upon his back in bed, and his water drawn off by a catheter, at 9, p. m. when the priapism still remained.

11th.—Has continued much the same till this morning, when he vomited. Considerable tension of the abdomen. Water drawn off regularly twice a day. Was ordered to have a glyster administered at night, but his bowels were well opened during the day, so he did not have it. Inflammatory blushing of the integuments around the wound of the head.

13th.—A recurrence of the vomiting. Bowels costive. To take fifteen grains of cathartic extract instanter. Four or five small abscesses on one side of the head, which were opened. The skin covering the whole head was very tender to the touch. A poultice was ordered to be applied over the head. Lies very comatose. Is rather more incoherent in his answers to questions put to him. Pulse 108, full, and rather hard.

14th.—Sloughing of the integuments over the sacrum. All his evacuations have passed involuntarily since his admission. He was placed upon the bed recommended by Earle for fractures of the spine. Occasionally, feels a tingling in his legs. Pulse reduced to 88. Complains of great pain in his head. Granulations in the wound of the head very sluggish.

28th.—Slough has separated, and the granulations are remarkably florid. Wound of the head nearly healed.

June 10th.—Has continued much the same up to the present date: to-day he was attacked with severe dyspnœa, and his face (according to the nurse,) appeared, for a short time, very black. When he was visited, which was very soon after, he was getting better, and continued so until the 12th, when he was again attacked in the same way, and when I saw him, he was evidently sinking fast; his pulse faltered, and the air-cells were clogged up with mucus. He sank very rapidly, and died about 3, p. m.

The granulations in the sore at the bottom of his back, continued to fill it up very vigorously up to the day of his death.

Post-mortem examination.—A fracture of the rings of the 2nd, 3rd, and 4th, dorsal vertebræ, and body of the 3rd, was discovered, at which situation, the medullary cord was very much diminished in size, from pressure of the upper portion of the body of the third; and when the theca was laid open, the substance of the cord had become almost of the consistence and appearance of thick pus. There was rather a long patch of extravasated blood between the rings of the upper dorsal vertebræ and the dura mater. There was extensive disease of the kidneys, but the other viscera bore a pretty natural and healthy appearance.

Case III.—Wound of the Lungs, with Emphysema.

May 12, 1831.—W. D., aged 28, was brought to the Worcester infirmary this morning, about 7 o'clock. with a small wound of the parietes of the chest, between the 7th aud 8th rib, just below the situation of the heart, made by a pocket knife, thrust at him by another man. He was much exhausted, as there had been considerable hemorrhage from the wound previous to his admission. When a probe was passed into the wound, a fresh gush of blood poured out, of an arterial hue, accompanied by bubbles of air. Countenance pale; pulse weak and thready. The edges of the wound were brought together by adhesive strips, and the man was put to bed. No respiratory murmur was discernible on the left side of the chest. He was bled in the evening, his pulse having risen.

13th.—About middle day, he was seized with most excruciating pain, with a sense of oppression in the chest; when the dressings being removed, and a probe introduced, a great quantity of air was liberated, which gave him instant relief. He became quite quiet, though before, he had been tossing about the bed very violently. His pulse strengthened towards 5, p. m. and he was bled to fourteen ounces. Emphysema, to a small extent, around the wound.

14th.—Pulse 100, firm. Emphysema somewhat extended, but no air escapes from the wound to-day. Ordered to take a saline antimonial draught every four hours.

15th.—Respiratory murmur slightly returned in the left side of the chest. Pulse 92, quiet.

16th.—Coughing much increased; tongue dry and furred; pulse 96; emphysema somewhat less; bowels open. Perstet.

17th.—Breathing more embarrassed; pulse 140. V. S. ad ℥xx.

18th.—Is somewhat better. Wound healing.

20th.—Pulse 100. Breathes with both sides of the chest, though much less with the left than the right side.

27th. Wound healed. Breathes equally with both sides of the thorax, and, with the exception of occasional head-aches, complains of no pain, but feels very weak.

June 4th.—Left the infirmary quite well, only rather weaker than he used to be.

NOTICES AND ACKNOWLEDGEMENTS.

BOOKS RECEIVED.

A Synopsis of the Bones, Ligaments, &c. By Mr. W. Sands Cox, Lecturer on Anatomy and Surgery, at the School of Medicine, in Birmingham.

Remarks on the importance of extending the means for the cultivation of Medical Science in Birmingham.

The Glasgow Medical Journal, for May, 1831.

The London Medical and Surgical Journal, May, June, and July.

The American Journal of Medical Sciences, February, 1831.

A Practical Treatise on Injuries of the Head.

The London Medical Gazettee.

The Fourteenth No. will be published on the 1st of November, and the succeeding Numbers Quarterly.

All Letters and Communications, addressed, free of expense, (under cover,) to the Editors, at the office of the Worcester Journal, will receive immediate attention.

THE MIDLAND

Medical & Surgical Reporter,

AND

TOPOGRAPHICAL AND STATISTICAL JOURNAL.

HOMO, NATURÆ MINISTER ET INTERPRES, TANTUM FACIT ET INTELLIGIT, QUANTUM, DE NATURÆ ORDINE, RE VEL MENTE OBSERVAVERIT; NEC AMPLIUS SCIT, AUT POTEST.—BACON, NOVUM ORGANUM.

No. XIV. NOVEMBER, 1831.

On the late POPULATION RETURNS *of the* MANUFACTURING DISTRICTS.

BY J. K. WALKER, M. D., HUDDERSFIELD.

AT a period when the raven note of despondency is so often heard denouncing the decline of our commercial prosperity, and the gradual decay of English greatness, it is no small consolation to learn, from a perusal of the population returns recently completed, that every part of the empire presents us the refreshing spectacle of augmented population. Nor will it be less gratifying to the philanthropist to find, on examining the registers of mortality, that, as far as can be decided by the late returns, the mean duration of human life in our island, has attained a considerable increase. Opinions will vary as to the cause of this happy change; one may ascribe it to the more ample supply of food, clothing, fuel, better habitations; another, to a salutary change in the habits of our population; to increased attention to cleanliness and ventilation in their persons and houses; and, though last, not least, to improved medical practice. I shall not attempt in this place, to weigh in the balance, the relative claims which each of these causes has to the production of events so gratifying, yet it may not be amiss to observe, that if the end of all government is the happiness of the subject, we have, of all nations, the most reason to be thankful, for no other nation can produce such unequivocal evidences of substantial happiness, as we have had recently exhibited to us, in those documents which I have made the subject of the present paper.

Honour and wealth may make a nation great; but with nations as with individuals, a truer criterion of its happiness is to be found in the superior state of health, and length of days, of its

inhabitants. I do not appeal to the mere increase of population, as indicative of our prosperity, for we see too clearly, that in the worst parts of Ireland, population increases more rapidly than in places where the people are better off; but if, along with increase of population, we find a general increase in the duration of life, we may safely say of such a community, however unhealthy certain portions of it may be, that collectively, there is a corresponding improvement in health, and a diminution of those causes that militate against longevity.

But, much as the late population returns contain, to shew that our manufacturing population have a lower annual mortality than their forefathers had a century ago, we must still deplore that there are so many causes in the nature of their occupation, frequent confinement in impure atmosphere, and not infrequent habits of dissipation, to multiply chronic disorders among the working classes, and abridge the term of life. Day after day, the mule or the loom moves the accustomed number of hours, and the full amount of work must be done. There are not two grades of labour, one for the whole, and another for the sick. The consequence is, that many instances of indisposition, which, by temporary relaxation, aided by medical treatment, might have been soon removed, become inveterate, and lay the foundation of permanent disease. Nor do the regulations of the sick clubs at all tend to mitigate the evil, most of them requiring no medium betwixt full employment and entire indolence. To the credit of the humane feeling of the age, the system of night working is now nearly discontinued, and, under the fostering care of the legislature, an interdict, let us hope, will shortly be put on the unnatural practice of immuring the children of the poor, during a space of 14 or 15 hours, within the walls of a factory. The curse denounced on our first parents, was not designed to fall upon the delicate limbs of children.* Too often has it happened that the order of nature has been inverted, and, instead of the father supporting his child at that tender age, the child has been dragged from its bed at four o'clock in the morning in the depth

* Manufacturing greediness (says an eloquent writer in the *Quarterly Review,)* sacrifices a nobler species! at a time when the trade barometer is but beginning to rise from its lowest point of depression, the Manchester newspapers put forth a display of its productive powers, as if for exultation: they tell us, that there are in the United Kingdom, 58,000 looms propelled by water and steam, and that they are manufacturing at a rate which, allowing six yards for the yearly consumption of one person, would supply 62,700,000 persons per annum! There is a popular belief, that the foundations of some of our most splendid and venerable edifices, are laid upon woolpacks: one might suppose, that the great fabric of British prosperity rested upon cotton; that the two purposes for which human beings are sent into the world, are to manufacture it, and to wear it; that the proper definition of man is a manufacturing animal, and that the use for which children are created, is to feed power-looms.

of winter, to minister to the cupidity of the author of its being, sometimes to support him in idleness and debauchery. We need look to no other cause for the many cases of imperfect development of the functions of nature in the rising generation of the poor. To this we may refer the endless variety of morbid symptoms, that extend their pernicious consequences through every stage of after-life. But a change is approaching already. Has the mortality of children decreased in manufacturing districts? Let humanity assert her rights, and the day is not far distant when our factories will cease to deserve the stigma so long attached to them. Much has already been done; limit the time of working by law, and one main objection, as far as children are concerned, is removed.* There are many other regulations to be sure, necessary, but such as the law cannot interfere with, but which must be left to private beneficence. With respect to some of our woollen factories, I can safely say that among children in the same class of life, it would be difficult to find an equal number in the enjoyment of better health. Not so in the cotton factories; here many circumstances, such as high temperature and impure air, conspire to make their inmates unhealthy. These, we are told, are inherent in the nature of the system, but there are other causes than an exhausted and heated atmosphere, or close confinement, which tend to render these factories prejudicial. Does not an awful responsibility rest upon the employer who congregates in his factory perhaps 800 or 1000 operatives? Ought he not to consider himself as the moral guardian of this great family? and how is this momentous duty too often discharged? If the master acknowledges no common bond as existing between him and his labourers; if he does not even know their names and faces; if he avowedly or practically disclaims all regard to their conduct, except as manufacturers; if he takes no interest in their moral and religious improvement, can we wonder that these depots of wealth should become the nurseries of every species of profligacy? Can you expect any respect or gratitude to a master, who feels no interest in the welfare of his labourers? It is a mere delusion to think that Sunday schools, however well organized, together with the small existing number of charity schools, are adequate to the diffusion of education in our manufacturing districts, and not less defective, are the means of religious improvement. To this capital defect are we to ascribe the low grade of morals in this part of our population; to this may we refer the growth of early profligacy, contempt of parents, improvident marriages, neglect of religion, insubordination to superiors, reckless waste, dishonesty, general tippling in

* Among other improvements in our factories, the separation of the sexes, of the married and unmarried, and the establishment of *Saving Clubs*, have met with adoption. If, to these regulations of factory police, there were superadded some short form of daily prayer, the employer and the employed would have reason to be thankful for the change.

both sexes, pauperism, and, as the necessary sequel, the frequent occurrence of disease. Against these abuses it is high time that every good man should lift his voice. By the agency of our medical charities, we carry relief to the dwellings of the sick poor, but were that noble array of infirmaries and dispensaries increased ten fold, it could do no more than relieve *some* of the evils of this system. Improve the moral condition of your operatives, and its effects will be seen in the increase of the happiness, health and longevity, of that important class. There is no reason why they should not become as moral, if not as healthy, as any other part of our population. It is gratifying, however, to find, from whatever cause, that a striking declension of mortality has taken place during the last 50 years. Take Manchester for instance. In 1773, the total number of the inhabitants of Manchester and Salford, including the townships, was 29,151. The average number of burials (dissenters included,) for five preceding years, was 958. The proportion of deaths to the inhabitants was therefore as one to 30.5. Compare this with the present population and mortality returns of Manchester, and the annual mortality will be found not to exceed one in 45, while the population of Manchester and the townships in the immediate neighbourhood,* amounts to 233,380, according to the last census, being an increase of 75,000, or nearly 50 per cent. in 10 years. The population of Oldham is now 32,492; in 1821, it was 21,662. That of Stockport, 44,462, exhibits an equal increase.

In other parts of Lancashire, the increase has been from 25 to 50 per cent. In the manufacturing part of the West Riding of Yorkshire, we find an equal rate of increase, and, as far as I have seen, a uniform declension of mortality. The town of Sheffield presents a gradual rise of population. That town, indeed, was engaged in the fabrication of iron and steel instruments, so early as the year 1297, but its inhabitants, at the commencement of the 17th century, *amounted only to* 2207 souls. In the year 1750, there was first opened a direct trade with the Continent, and in 1786, the first steam-engine grinding wheel was erected on the east bank, on the Sheaf, and though no place has suffered more from the vicissitudes of trade, yet the population in 1801, was 31,314; in 1811, 35,840; in 1821, 42,157; in 1831, 59,011, being an increase since the last census, of nearly 50 per cent. There are certain processes in grinding cutlery, and particularly that branch termed dry grinding, which

* I have before me the population returns of Leeds, Manchester, Sheffield, Huddersfield, and other manufacturing towns; but, as I found it impossible to insert so large a mass of matter in a work such as the Midland Journal, dedicated to objects more immediately of a professional nature, your readers, I am sure, will readily dispense with their insertion here. I have, however, thought it right to make one exception in favour of the Leeds returns, especially as the increase of population there, is a fair specimen of the increasing state of the whole of the manufacturing district.

have proved a source of pulmonary disease to many of the workmen, and, we are told, that these men seldom attain the age of 50. Yet with this and various other causes, tending to abridge the term of human life, there is no reason to conclude that the mortality exceeds that of many other parts of the West Riding. The average number of individuals to each family, is about 4.07. The population of the town of Huddersfield has doubled during the last 20 years. In 1811, it was only 9,671; in 1821, it amounted to 13,284, but at the last census, it equalled 19,035, exceeding that of either Halifax or Wakefield; *whereas, a century ago, its population was less than half of either of these towns.* There is one peculiarity in the returns of this district, which is not often to be met with, viz. an excess of males above the females, the reverse being usually the case. In many of the villages this excess is considerable, arising from the great demand for operatives. In a very few of the villages, from a depression of the fancy trade, there is a slight diminution of the population.

The sum total of population of the four parishes of Huddersfield, Kirkheaton, Almondbury, and Kirkburton, is 103,384. With respect to the mortality of Huddersfield, from the great number of burials from the adjacent parishes, it is difficult to form a correct estimate; but, from the best calculations I have been able to make, the mortality will not exceed 1 in 50. There is an increase of infant mortality in one year, arising from the fatality of the small-pox, which was then very prevalent, especially among the children of the poor. But, in general, the health of the children in the woollen, is incomparably better than in the cotton factories; and I can say, with truth, there is no part where greater exertions are made to improve their condition, and, above all, to impart to them the blessings of a religious education.

On a survey of the returns of the populations of the town of Leeds, as well as of a copy of the answers returned by the registrar of the parish church of Leeds, to certain questions contained in the act of Parliament, it appears that the population of the town of Leeds has increased nearly a third since the census of 1821. At that time its amount was 48,603; at present it is 67,554, being an increase of 18,951, while the increase for the whole Borough during the same period, is 35,599. In all manufacturing districts, the encouragement to matrimony is considerable, and, therefore, if life be more speedily wasted, it is probably produced in a far greater ratio. Wherever factories abound, where children can be employed at an early age, the fear of a large family is not only diminished, but every child is regarded as an addition of fortune. "Happy is he that has his quiver full of them," is their motto. This will account for the increase of population in most parts of the kingdom, where children are the creators of wealth; and it is to be lamented on many grounds that the population returns do not furnish us with the number of children under a

certain age, employed in this manner, especially at a period when this subject is about to attract the attention of the Legislature. How dependent this great mass of population (119,345) is upon the surrounding district for its support, is evinced by this fact, that of the whole number, not more than 593 labourers are employed in agriculture, while the number of those employed in manufacture, is 6,227. The number of baptisms, as taken from the register of the parish church, during the last ten years, is 22,252, and of the burials, 12,025. The same proportion is found in the returns of the dissenters for the same period, viz. of births, 2,724; of burials, 1,466. of the above 12,025 burials in the parish church, the following is the scale of ages :—

	Males.	*Females.*	*Total.*
Children under 1 year, ...	1748	1493	3241
Children from 1 to 2 years, inclusive, ...	1293	1271	2564
Children and adults, from 3 to 29 years, ditto,...	1333	1285	2618
Adults from 30 to 59 years, ditto, ...	1103	983	2086
Adults from 60 to 103 years, ditto, ...	723	793	1516
In ten years,.....	6200	5825	12,025

It appears that the number of children who have been buried under one year old, is 3,241, which is more than one-fourth of the whole number of burials in the said ten years. The number of children who have been buried *under the age of six, is* 6721, *which is considerably more than one-half of the whole number of burials.*

Commencing the calculation from 10 years of age upwards, the age of 60 proves to have produced the greatest number of interments. there having been buried 50 males, and 50 females; total, 100. The four next greatest numbers at particular years, are as follow:—

Age.	*Males.*	*Females.*	*Total.*
22 ...	55 ...	44 ...	99
70 ...	46 ...	49 ...	95
45 ...	44 ...	49 ...	93
48 ...	45 ...	47 ...	92

From under one year, up to 59, inclusive, there were more males buried by 445, than females; from 60 to 79, both inclusive, there were more females buried by 30 than males; from 80 to 90, there were more females buried by 43 than males. The whole of the interments from the age of 80 and upwards, were, males, 111; females 151, which evidences a difference of 40 in favour of the prolonged lives of females, taken generally.

The number of baptisms in the ten years is, males, 11,141; females, 11,111. The number of burials in the ten years, is, males, 6,200; females, 5,825, shewing that the interments of males exceeded those of females by 375, and the excess of baptisms over burials, amounting to 10,227, or nearly double. The

two years of greatest mortality, were 1826 and 1828, while the intermediate year, 1827, appears to have been less so than either, by more than 700.* For want of more minute returns from those dissenting places of worship where interments take place, no very accurate calculation can be made of the proportion of deaths to the population, and it is to be lamented that some better system is not devised in all towns, which should furnish us with *an annual synopsis* of the births and burials at every place of public worship. Until this is done, statistical calculations are little to be relied upon, where so many sources of error exist. But, making all due abatement for these irregularities, there can be no doubt that the average mortality of the last decade in Leeds, is considerably less than any preceding, and does not much exceed that of the most healthy county in England. Some persons are apt to lay great stress on the influence of immigration on the population of our large manufacturing towns, and true it is that hundreds of irish paupers annually resort to these vast emporiums of commerce, in the hope of finding employment. Nay, in such towns as Manchester and Leeds, many thousands of Irish establish themselves, so as to form a kind of colony, to the great disparagement of the native labourer. But, if the amount of population receives a direct addition from this source, it is in most cases more than counterbalanced by the indirect mischief occasioned by the supprsession of English industry. From his meagre mode of life, the Irish labourer can subsist on scanty allowance and trifling wages. In the great mart of competition, he undersells the native labourer, and oftentimes drives him to his parish. Nearly two millions of the English poor rates annually arise from this cause. But what is the consequence? So long as the native labourers could obtain high wages, they had no diffiulty in the support of the largest families; they were tempted to marry early, and a more rapid increase of population followed. But, this reduced scale of wages, we find operating as a positive check to population. Some are deterred from marrying, and others marry later than they otherwise would do; while those who marry early in spite of all difficulties, if they happen to have large families, will not be able to support them in such a way as to prevent diseases and premature mortality, arising from poverty and bad nourishment. The influence of these causes may vary in different places and at different times, but, it is quite clear, I

* The law enforcing the keeping of registers is still defective, and does not adequately regard political, civil, or medical information. Many dissenting sects baptize agreeably to their own forms, yet bury in the cemetries of the established church, and thus create a false disproportion between the returns of baptisms and burials. How many children who die unbaptized, are not entered in any register or bill of mortality? Registers of baptism do not set forth the place and date of birth, and registers of burials do not specify where a person died, as well as where he lived, nor his condition, whether single, married, or widowed.

think, that the population of our large towns receives no eventual increase from this Irish importation, which gives with the one hand what it takes away with the other; and, moreover, substitutes for a clean and healthy class of labourers, a race of men whose example is not very likely to elevate the standard of character of our native poor. This is a subject of vital importance to the whole nation. The facility of immigration has given it a character totally different from that of any former period. The men who formerly came over, did so only in harvest time, when every hand is in request; that over, they returned to their own country, and paid the extortionate rents screwed from them, with their wages. This periodical visitation was never regarded as an evil: but what is the present state of things? Hardly had the steam packets come into use, than the superabundant population rolled in torrents over the land, to find a sustenance here, which their greedy landlords denied them at home; and, what has followed? Look at its consequences in Manchester and other large towns; look at the numbers of English families thrown upon the parish; look at the expenses of removal in our county rates; look at our infirmaries and dispensaries thronged with Irish applicants; and look, above all, to the threatened debasement of our own labourers to the condition of the Irish, that is, to the lowest condition in which animal life can be supported: and though as a punishment, when any of these unhappy strangers fail to obtain a livelihood, these poor creatures are sometimes sent back to Ireland, yet, is it not notorious, that when any of these out-casts are re-shipped from one port, they make their way back to another, as speedily as possible? Subscriptions are raised in Ireland for the purpose of landing these miserable men upon our coasts, and lest if sent in large numbers, they might be returned, the plan is, to send them over by small detachments, providing them with a small sum to pay their way. Is this a state of things for a wise government to wink at, without taking some steps, if not to arrest, at least to diminish, the evil? Why is it that the old maxim, that the riches of a nation are its people, is falsified in the case of Ireland, and that the blessing of "increase and multiply," is by man converted into a curse? And this is the case, while millions of acres in Ireland want nothing but cultivation to make them the most fertile portions of the empire, and a mine of wealth to our national resources. But this can never be realized, until the Irish landlord is rendered amenable, by compulsory assessments, for the support of his own poor.

On looking over the returns of marriages in different towns, during the last decade, I do not observe that in general a season of adversity has had any material influence on the number of marriages in any part of the West Riding of Yorkshire; but the increase has, from year to year, been progressive, in spite of the theories of politicians. What increase there is in the proportion of early marriages, the returns, unfortunately, do not enable us

to say. But, since the factory system has so generally superseded hand-work, and given employment to so many thousands of children, it seems quite clear that the proportion of early marriages has, on the whole, increased. Indeed, from pretty extensive enquiries, I have reason to know that it is the case. The term of each generation may be something abridged by early marriages, but, it is not always the case that early marriages are more prolific. There is reason to believe, indeed, from observations *on an extensive scale*, that whether women marry as soon as they are marriageable, or six or seven years later, the number of children born in the course of a certain time, is nearly the same.

The education of the poor, now exercising its influence in every corner of the land, it is thought by some, may create a more prudent race, and may check the number of early marriages. Education is a powerful weapon, I admit; it may wean a man from gross and sensual pursuits, it may render him more expert in his calling, it may keep him from the beer shop, and awaken a repugnance to pauperism; but, the better you make men, and the more you improve their moral nature, *the more surely will they yearn after the enjoyment of domestic affection.* It is among the worst educated of our population, that filiations are the most numerous.

It is impossible, in watching the rising population of the manufacturing districts, not to be sensible of the mighty influence exercised by the adoption of machinery, and the suppression of domestic manufacturers. That honest and valuable race of men, that for centuries supplied our markets with goods, where are they? In a few years they will be nearly extinct. It is vain, however, to argue against improvements in science. The introduction of machinery, for the purpose of performing quicker and better, by few hands, the work which was done by many, has, so far from retarding, decidedly accelerated the march of population. It has, by enabling us to manufacture cheaper, opened to us a preference in foreign markets. But, has it conduced to our permanent prosperity? A market is no sooner opened, than adventurers pour in their goods in such profusion, that it is instantly overstocked. The prosperity is of a paroxysmal kind; presently comes the cold fit, then a year of bankruptcies. The speculator finds his way into the Gazette, but what becomes of the mass of population created by him? there is a season of distress; the poor-rates rise. We have witnessed such seasons in this manufacturing district during the last decade. This was not the case formerly, when the process of manufacturing was slower. If there were fewer hands employed, they were not so liable to be turned adrift, and their wages were less liable to fluctuations. Is machinery, then, an evil? assuredly not. The very persons who were themselves suffering from low wages from this cause, acknowledged,* on their examination before the

* Vide second report—Emigration.

Committee of the House of Commons, that machinery could not be stopped, or that if it could, it would not be desirable, any more than it would be desirable to supersede the use of the plough by spade husbandry.*

New inventions will arise still more to supersede manual labour, and in proportion as improvements in machinery increase, competition will be greater, and over-production will again superinduce pauperism; and he is a wise statesman who shall point out a remedy for this growing evil, and prevent those periodical convulsions which agitate the commercial world, and, through them, the whole fabric of society. Something is wanting to remove that monstrous solecism of things, in which it so often happens, that with the ability and will to work, our labourers are unable to find employment. I know of nothing more likely to diminish the magnitude of the evil, than the cultivation of the moral and religious improvement of the working classes, which will teach them, in prosperous times, to husband their resources, and to prefer the savings bank to the beer shop. How rarely it happens, that with the most extravagant wages, any portion of them find their way to the savings bank; no wonder that those with smaller earnings, be found wanting in the exercise of economy.

I have heard, in agricultural counties, of rewards offered, for such men as should have brought up the largest families upon the wages of labour, without parochial relief. I see no reason why such an incentive should not be resorted to in manufacturing districts, where there is so strong a disposition to depend on poor rates, and where the rate of wages is so mutable. The time is coming, however, when the increase of our population must form a prominent subject in the discussions of the Legislature, and when our senators, turning aside from the tumults of party strife, must fix their regards on this vital question. Had this been done sooner, something might have been done to avert the many signal calamities that have so frequently, of late years, befallen our mauufacturing population. There are, indeed, evils which neither Kings nor Senates can cure, but though authority

* A great deal of needless alarm has been felt by the English manufacturer, lest his goods should be undersold in the foreign market by rivals, who, paying their workmen lower wages, can therefore afford to sell them cheaper; but here our machinery steps in, and counteracts the difference; and even if the foreigner should possess himself of machinery, can he employ a steam-engine without a constant supply of coals? Has he, besides, water-falls? It is not on such rivers as the Danube, the Rhine, the Elbe, or the Vistula, *or in rivers running through a flat district*, but on the banks of such rivers as the Calder that factories are built; here they can impound, release, or divert, the stream, at pleasure. Without this, no machinery would be of any use. Until the manufacturers of this country lose these privileges of coal, of fire and water, which nature has conferred upon them, they cannot be undersold by continental competitors, even though they possessed all our machinery.

is powerless in guarding against the folly of individuals, yet, who can read the present population returns, with a rate of increase so astounding, but must allow, that the sooner the subject is sifted in all its bearings, the sooner will groundless apprehensions be removed; and if our past policy has not in every respect been in exact unison with the present constitution of society, the sooner will it be modified, so as to graduate with the spirit of the times. It was Mr. Pitt's opinion, in 1796, that it was *desirable that an annual report concerning the poor, should be made to Parliament*, and that Parliament should impose upon itself the duty of tracing the effect of its system from year to year, till it should be fully matured; and that there should be a standing order of the house for this purpose; and, in short, that there should *be an annual budget opened*, containing the details of the whole system of poor laws, by which it would be seen that the Legislature had a constant and watchful eye upon the interests of the poorest part of the community." Had that salutary recommendation been adopted, how much information might have been elicited, and how many evils provided against! Was that great man living now, I cannot but believe that his first attentions would be directed to this most difficult subject, and that he would see, in the circumstances of the times, a motive stronger far than existed in his day; for making this question a subject of periodical discussion in the legislature. For, though no material result should follow, it is something to be able to put to silence, the ignorance of factious men, and satisfy the entire nation, that the Legislature is alive to the march of events, and ready to apply remedies to such admitted evils, as can be removed without the hazard of introducing greater in their stead.

While so many heads are digesting plans for the amelioration of the poor, and so many schemes propounded to arrest the spread of pauperism, it is not surprising that some of them should savour more of benevolence than judgment. That such has been the case of late years, no observer can be ignorant. But though of many of these it may be said they are fast sinking into oblivion, there is one which has excited so much attention, and is so important in itself, and undertaken, as I believe, with motives so pure, that it deserves, and will meet with, a candid examination from every well wisher to his country. I allude to the recent formation of Co-operative Societies.* The promoters of this system express a strong hope, that they have at length disco-

* Labour (says one of these co-operative publications) is working against machinery. Those that eat, drink, and get families, are working against those that do not eat, drink, or get families. In such a contest, the eater and drinker must be worsted. At present, in working for others, we get for ourselves only a small part of the produce of our work. As we have no capital, we are obliged to find a master to give us employment, and we must work for common wages. It is capital we want; we must form ourselves into a society for this purpose; we must form a fund by weekly deposits.

vered the secret for removing the distresses of the working classes; and there are now, more than 100 such societies in different parts of England. If their adoption had no other result than to give the labourer a more ample maintenance, to compel the capitalist to be satisfied with smaller profits, and diminish the excessive inequality of condition among men, no benevolent mind could withhold approbation from so laudable a design; but, would it not interfere with the present retail traders? Is it a system calculated for perpetuity? A fraudulent manager might, after embezzling the stock, take shelter in a foreign country.

At present, their success may be accounted for by the caution in admitting none but persons of irreproachable character, and the rejection of all idle and drunken characters. According to the prospectus, all the glories of the golden age are to be realized. Every member of the society, we are told, will work, there will be no idlers. All the property will be common property, there will be no pauperism nor crime. When any of the members are ill, they will live and have medical attendance at the common expense. When the members are too old to work, they will still live among their "friends, and end their days in peace and plenty, instead of a workhouse;"* and then follow other regulations on the subject of education, and the institution of shops. All this, it is true, is very pleasant to read, but is it practicable? Is it a system so free from restrictions, as to suit the free notions of Englishmen? But, there is so much that is intrinsically good in it, that justice requires us to forbear all hasty censure, and let it undergo the ordeal of time and experience. The societies are all too recent, to enable us to admit of any accurate estimate of their real merit, or their ultimate effects. But whether they fail or succeed, some good must arise from the experiment. Mankind will learn to appreciate the value of such institutions, and even to glean wisdom from their failure. But, there is one feature in this plan, which has always appeared to me capable, under judicious management, of effecting an important amelioration in the manners of the poor. I allude to the *habit of weekly savings*, to form a general fund for the benefit of the society, a practice which, if it should ever become general among the working classes, would ultimately foster a salutary spirit of independence, and extricate them from the degrading thraldom under which they have so long laboured, of habitual reliance on the poor laws. At present, how often do they calculate upon parish relief as a source of support, and contract marriages, in the certainty that their offspring must be provided for? The ordinary checks of prudence, which used formerly to prevent a couple from marrying, until they had a fair and reasonable prospect of providing for their family, are now wholly removed. How important a change in the feelings of the lower orders, would take place in a few years, were they delivered from the debasing

* Vide Prospectus.

taint of pauperism, and the poor laws restored once more to *their original intendment.* Those laws were projected and carried into execution, by some of the wisest statesmen that ever swayed the destinies of this empire. They were not hastily concocted to serve as a temporary expedient, but engrossed the attention of the Legislature during the whole of Elizabeth's long and prosperous reign; and, if the spirit of those laws had never been deviated from, we should not, at this day, have had to deplore the prevalence of that sad moral disease which has corrupted the worth, and sapped that healthy feeling of independence of our working classes, which once recoiled at the bare contact of pauperism. Were that spirit adhered to, relief would be given with a far more sparing hand to the poor, whom no natural incapacity prevented from working; the wages of labour would no longer be made up, as they now often are, partly of pay, and partly of parish relief; and the charge of maintaining the aged and infirm poor, would be borne not merely by the land, but by the gains of trade, by the income of professions, and by the profits of money lent at interest to the Government. At present, the *landholder pays most unequally.* It may be right to give every due facility to the establishment of factories, as so many depots of national wealth, and as giving this country an ascendency in competing with foreigners, from the superiority of our machinery. Neither could any one object to the princely fortunes amassed by the manufacturer. It is only the just reward of enlightened enterprize. But, we know that the current of commerce ebbs and flows, and that, in a disastrous season, thousands of hands are thrown out of employment. Who has created this mass of pauperism? not the landholder, and yet you call upon him to relieve it. It becomes a question, therefore, how far it would be politic in the Legislature, to legalize certain assessments upon those great sources of national wealth, so as to *render them amenable in fair proportion to the support of that vast body of poor, of their own creation.** No reasonable man can object to this principle, though the mode of carrying it into effect is, I admit, beset with difficulties, and on so momentous a question, the most wary legislator will pause before he forms an opinion, where so many interests are concerned. There are two objects to accomplish, to foster the manufacturing interest, as the best source of national wealth; but, while you do this, legislate, if you can, if not to prevent, at least, to palliate the violence of those shocks inflicted upon every portion of society, by the recur-

* How often has it happened in the manufacturing districts around Manchester, for example, in seasons of distress and low wages, that the cotton spinner will draw from the funds of the parish: his earnings are so inadequate to his support, that he must either starve, or have the deficiency made up to him from some other source; by this means, a very large proportian of the real cost of *fabricating cotton goods, is made to fall upon the owners of land, and other property rateable to the poor.*

rence of those seasons of distress, so frequent in a manufacturing community.

Does it surpass the power of human wisdom, to remove the melancholy anomaly, of thousands of industrious labourers reduced to want, not by any misconduct of their own, not by any affliction in the course of nature, not by any natural visitation of disease or famine, not by the ravages of war, but, by those changes in trade, which have come upon us like a thief in the night, and robbed thousands of their daily bread? These are subjects which it well becomes the Legislature of a great nation, to weigh in an impartial scale. Nor can there be any period so fitted for their consideration, as a period of general peace, and a period when, as I hope, we are gradually returning to our wonted career of commercial prosperity.*

By deferring these subjects to a season of commercial distress, there is less likelihood of a cool and dispassionate consideration. We too often, in such a dilemma, content ourselves with temporary palliatives, while the fomes of the malady lies untouched, ready to break out on some future occasion, with an augmented train of disastrous symptoms.

Your readers, I fear, will hardly excuse me for this unwarrantable encroachment on your pages, on a subject which, to some, may, perhaps, appear not quite within the professed object of your publication, but, to me, the question of population seems fraught with the deepest interest to the medical philosopher, whose special calling leads him to take cognizance of the effects on the constitution, of the endless variety of employments in which mankind is engaged. No person, who has had the means of observing the manners and health of those labourers who are

* With so many thousand acres of waste land to be found in most of our manufacturing districts, could not some system be adopted of providing a fund in seasons of prosperity, to be devoted to the cultivation of waste lands, as often as the state of the times deprives the working classes of employment in the factories. This plan has been found to succeed in the Netherlands, where, at a time when a large proportion of the population had been thrown out of employment by a decline in commerce, various plans for their relief were unsuccessfully tried; but, ultimately, it was determined to transfer this surplus population from those districts, in which their labour was no longer profitable, to agricultural colonies, established on some of the wastes and heaths, with which that country abounds, and the gratifying result of the Flemish system of home colonization is such, as should make us enquire if, under the same circumstances, in a country which contains more than 20 millions of acres of waste land, the same expedient might not be adopted; a district, or country colony, where every able-bodied person out of employment, might find both work and subsistence. There is annually squandered, an enormous capital, on the maintenance of able-bodied paupers; this is a clear loss to the nation; but, if this wasted capital were applied in home colonies, some return of capital would result, and the habits of industry of the working classes mentioned, unimpaired.

regularly employed in the operation of husbandry, can fail to distinguish the characters of rude health, which are legible in the florid countenances of our rural peasantry. Let him visit a manufacturing district, and enter the abode of the operative, where there is little comfort, and less cleanliness; small rooms, so constructed as if to exclude the pure light and air of heaven, whose gloom is heightened, and whose space, already too small, is cumbered with looms and spinning jennies. How different the appearance of their inmates! Too eloquently do their wan and sickly visages, proclaim the want of that pure air and invigorating exercise, which string the nerves and purify the blood. Is it surprising that they should become the more frequent victims of diseases than the hardy peasant? And even in the case of those operatives, whose avocations lead them to the open air, in large towns, their countenance is often pallid. These are distinctions that cannot have escaped the most superficial observer, but the medical man goes further. His daily observation leads him (especially if he should chance to be attached to a medical charity,) to remark the effects of impure air, of sedentary habits, and of different trades, on the human constitution. He will soon discover the powerful influence of these causes in exciting and modifying disease, and abridging the term of life. The various disorders of the digestive organs, how frequent are they among the whole of that class, whose sedentary habits immure them for the entire day, within their own confined walls! The mere continuation in one posture, the pressure on the breast-beam, or the exclusive action of certain muscles, all serve to superinduce peculiarity of disease. He will trace the tendency of certain employments to produce spinal affections; of others, to give birth to affections of the pulmonary organs; and, in too many instances, he will have to witness the bitter fruits of intemperance (when the wages of the working classes are high) in chronic diseases of the stomach or liver. In other cases, defective clothing, innutritious diet, or cold and damp tenements, will call into activity sometimes scrofula, at others, rheumatism, or some anomalous cutaneous affection. The effect of malaria on the human frame, will not escape his notice. It will, in short, be his duty to study the influence of local causes in deteriorating the health of the poor, and how far they are capable of removal. The best riches of a state, are a hardy, as well as numerous, population; and when so many heads are at work to improve the condition of the working classes, it will ill become the medical practitioner to look on with apathy.

We have nothing to do with the advocates of this or that system. We know that the poor will continue to increase and multiply, for it is in the order of nature, and of Providence, that they should, and our duty is to aid in bettering their lot, and relieving those ills incidental to their unhealthy, and often dangerous callings. It is high time that the subject of medical statistics should, in a population like ours, be more generally

attended to, and the causes of the comparative sickness and mortality of different localities, more carefully investigated. At no former period were the facilities for this purpose greater than at present, when almost every town of any magnitude, possesses its local medical charity, in which a great portion of the sick poor of the neighbourhood, receive relief. Let every such institution keep a correct record of the description of cases admitted, not overlooking any fact that can serve to explain the phenomena of disease, and the share which *local* causes have in producing or modifying it. From such an assemblage of materials, it will be wonderful, indeed, if some benefit should not arise, if some new light should not be afforded, that may enlarge the boundaries of our art, and furnish us with new weapons to combat the ravages of disease, and prolong the thread of human existence. This is what society requires at our hands, and humanity will not allow us to disobey the call.

The following Note should have been inserted at the bottom of page 80.

The estreats of this county annually present a serious item of disbursement for the removal of Irish vagrants; and the medical charities at Manchester, Leeds, Huddersfield, Halifax and Bradford, all suffer from the prodigious influx of Irish applicants. In Huddersfield, for the last 17 years, we have had, on the average, from 2 to 300 Irish admissions annually, so that the Dispensary has been burdened with an expense of 20*l.* or 30*l.* annually, and since its first foundation, above 400*l.* and this evil is growing upon us.

ARTICLE II.

On Spinal Weakness, and some effects of Incipient Curvature.

BY E. BARLOW, M. D.

Senior Physician to the Bath United Hospital, and one of the Physicians to the Bath Hospital or Infirmary, &c. &c.

An ingenious Essay on Spinal Distortion, by Mr. Beale, surgeon, of London, gave rise to the following remarks, which were transmitted to him as a private communication, shortly after the publication of his interesting work.* Some valuable lectures on the same subject, by Mr. Charles Bell, had previously excited my attention, chiefly by the sound pathological principles displayed, but, in part, also, by his having assigned to the consecutive flexures, which take place in lateral curvature, an order different from what my observation had traced. Mr. Bell repre-

* At Mr. Beale's request, Dr. Barlow gave him permission to make use of his communication in any new edition of his work; but he was not apprised that Mr. Beale meant to do so, when he prepared this paper for the Midland Reporter.

sented the primary flexure as taking place always in the lumbar vertebræ. My observations had led me to consider it as more frequently occurring in the dorsal; and finding that Mr. Beale had met with cases in which the dorsal bend had been the earliest, I was induced to communicate to him the views which I had been led to form, my object being merely to incite him to more extended enquiry and closer examination. It now occurs to me that this purpose may be promoted, by submitting the following imperfect sketch to the readers of the Midland Reporter.

In the consideration of disease, no circumstance is more important, than to determine the course which morbid changes observe in their ordinary succession. Were this course ascertained in all diseases, the earlier stages being included, as well as the more advanced, our knowledge of them would be more clear and exact, and our practical treatment, more direct and effectual. Concurring, as I do, with Mr. Bell, in regarding simple curvature of the spine as resulting from muscular weakness, and agreeing with him in the treatment which he so judiciously recommends, it may seem of little consequence whether the earlier bend takes place in the back or loins. But truth can never be unimportant; and, it will further appear in the sequel of this paper, that incipient flexure of the dorsal vertebræ is capable of inducing disturbances, the connexion of which, with their cause, cannot be too early detected, but which have not hitherto been sufficiently investigated with reference to this relation. My views of lateral curvature, derived from patient and unbiassed observation, had been insensibly acquiring the clearness and consistency which beget conviction, when Mr. Bell's lectures, and my unfeigned deference for his high authority, caused me to distrust my own accuracy; and conscious that I had made no extensive scrutiny, that my opportunities for observation were far inferior to what Mr. Bell enjoyed, and that what I had observed, was presented only by the cases which incidentally occur in the common course of practice, I found it necessary to re-examine the evidences on which my previous faith had been founded. I was sensible that, individually, these evidences had not been hastily admitted, but under the circumstances, I could not but suspect that my conclusions from them, collectively taken, might have been erroneously formed. It was this state of mind which led me to embody my conceptions, and to transmit them to Mr. Beale.

In Mr. Bell's lectures, I found much to entitle them to high praise; but he appeared to me to lay down, too exclusively, the order of succession in the several lateral curves, of which he states the lower inflection of the lumbar vertebræ, towards the left side, as the uniform commencement. This representation did not correspond with much that I had seen. For many years, lateral curvature in its incipient stage, had engaged my attention; first, from remarking the incidental derangements of health

so often attendant, and afterwards, from tracing back similar derangements to curvature, where this had not been previously obvious. This latter course of investigation, had led me oftentimes to discover incipient curvature, where none had been suspected; and, in consequence, to adapt the treatment to the primary derangement, with much satisfaction to myself, and benefit to the patient. I have seen, in connexion with lateral curvature, hurried respiration, short cough, palpitation, hysteria, with a host of nervous maladies, all yielding readily to proper treatment of the spine, and of the general health. When I afterwards met these symptoms, unaccompanied with the constitutional and other evidences of primary derangement in lungs, heart, or brain, I suspected the spine, and was thus led to look more closely after it. It has oftentimes surprised me to witness how much disturbance, a very slight inflection of the dorsal vertebræ was capable of occasioning in the heart and lungs, and how readily this was allayed, by treatment directed to the spine and to the state of general health. This treatment has, in my hands, been very simple, consisting chiefly of regulation of bowels, suitable diet, this being nutritive but not pampering; tonics, especially quinine; steel, when called for by deficient uterine action; recumbent posture alternated with exercise; frictions of the spine; cold sponging, a remedy which though apparently trivial, is of much power; shower bath. Other means may be required in the advanced stages of lateral curvature, but in the cases to which I now allude, the simple treatment here mentioned, will in general suffice.

From repeated examination of such cases, my impression had long been, that in them the dorsal curve was that which first occurred, and that the countervailing bend, afterwards took place below. My examination might not, it is true, have been conducted with sufficient accuracy, and though I still retain my early belief, I by no means contend that I may not be wrong. My reasons for maintaining this belief were, that in the earlier stages, I saw only the curve between the scapulæ, and could detect none lower down; that the raised shoulder and protruding scapula occurred where no projection of hip was discernible. In short, I doubted not the fact, and notwithstanding Mr. Bell's highly ingenious explanation of the rise and progress of lateral curvature, he has failed to convince me that he is on this point right. He considers the bend in the lumbar vertebræ, which he regards as the earliest, to take place in the standing posture. It may be so in many instances, but I cannot believe it to be so in all. In those which I have seen, the parties had not been subjected to long standing. They sat much, and were used to make forced efforts towards keeping the trunk of the body erect, when the natural strength was inadequate. This state of weakness can never be disguised from the observant practitioner. Even in the brief period of an ordinary medical examination, enough occurs to display it, beyond a doubt. The party makes

an effort to sit erect, but, in a few moments, relaxes, and the spine yields, the trunk sensibly sinking, and the back becoming arched. When this degree of weakness exists, the spine is never safe; it is sure to yield to one side or other, and the early flexure leads to a long train of nervous and visceral derangements. My persuasion has long been, that the lateral flexure which ensues on the condition here described, is, in a large number of cases, the earlier bend, that it results from simple muscular debility, and that the subsequent efforts to maintain an equilibrium, produce the curve below. If further observation and more extended enquiry shall confirm the truth of what I have stated respecting the influence of the incipient dorsal curve on the heart and lungs, the importance of ascertaining its priority, so as to direct attention to it at the earliest period, and without waiting for any bend to appear in the lumbar vertebræ, is sufficiently obvious. My own conclusion in this respect, I have the less distrusted, because circumstances having called my attention to the spine at a stage of flexure much too early for any surgical aid being thought of, I have had repeated opportunities of noticing the curve at its very commencement, and of witnessing the several disturbances so immediately connected with it. I suspect that Mr. Bell had chiefly seen advanced cases, it being for such that his assistance would be likely to be sought for. I wish the subject, however, to be more thoroughly investigated, and I shall rejoice to see in the pages of your Journal, more ample evidences adduced; whether in confirmation or disproof of what I have alleged, is to me indifferent, the establishment of truth being my only object. The discussion is of high importance, from the light which it cannot fail to shed on many derangements of female health, which, if mistaken in their nature, are liable to be much maltreated. Patients have been brought to me with alleged disease of the heart, suspected phthisis, &c. whose maladies have readily yielded to such treatment as I have noticed. Had either of the diseases specified been present, the success would have been less complete. I have seen excitement enough to mislead an unwary practitioner into active depletory treatment, and, however this might temporarily abate symptoms, it is clear that, by increasing weakness, it must aggravate disease. These cases demand close discrimination, for it does happen that the pulmonary disturbance passes into a state of congestion and inflammation, so as to require even the lancet to be used; but these instances differ widely from primary affections of the lungs, and need the treatment to be modified accordingly. It has often occurred to my thoughts, that the insidious disorganization of lungs which characterises phthisis, may often have its origin in the disturbance of pulmonary function incident to curved spine. If so, the investigation of this state would acquire a tenfold interest, and I trust that the enlightened individuals who make spinal curvature the subject of more particular enquiry, will not limit their researches to that state which, from extent of distor-

tion, calls for surgical aid, but, taking a wider range, embrace also those equally important cases, in which a degree of flexure, scarcely perceptible, is the parent of some of the most ruthless maladies by which female health and life are prematurely destroyed.

I have stated that the pulmonary disturbance consequent to incipient flexure of spine, passes occasionally into congestion, and inflammation requiring depletion. I may also mention, that the curved spine itself becomes the seat of acute pain, relievable by cupping or leeches. In both instances, I regard the vascular excitement as only contingent, and the bleeding, whether general or topical, as only subsidiary to the really curative treatment, which must essentially consist of means suited for restoring general health and muscular strength, by which alone can the spinal flexure, the grand source of the pectoral derangements, be radically or permanently cured.

Facts are still wanted to render the history of this morbid condition at all complete. The causes which occasion the state of debility, require to be taken into account, for, though this is much increased by its own consequences, as specified in the foregoing pages, the degree of it which produced those consequences, must itself have had an adequate cause, and this cause must need correction. It is not difficult to discover, in the perverted usages of modern times, especially in the overstrained zeal for education, the neglect of means necessary for promoting healthy vigour in the bodily frame, and in the whole course of fashionable life, ample cause for the weakness and ill health of young females; but this subject is far too copious to be discussed in this place. Uterine derangements continually attend and attract their full share of notice. They have even been assigned as the cause both of the spinal irritation and of the impaired health, by intelligent practitioners. My belief is, that though they assuredly aggravate the spinal irritation, and add to the disorder of the general health, they are not the cause of these derangements, but only co-ordinate effects of the general weakness and ill health which give rise to the whole.

In the succession of the derivative ailments mentioned some pages back, so far as I have been able to observe, the earliest are the breathlessness, short cough, and palpitation. The hysterical and nervous affections appear to me to mark a more advanced stage. With these latter I have more frequently found tenderness of spine than when the lungs and heart were alone affected. But on all these points I have little more than hints to offer. Such as they are, I submit them to enquiry, and willingly adopt the present mode as most likely to lead to useful results, for, though I shall not relax in my endeavours to mature my own experience, much time might elapse ere I could be prepared to embody the facts and conclusions in a well digested or consistent treatise; and, I am not without hopes, that what I have here advanced, may have the effect of inciting to more diligent and effectual scrutiny, others more competent to the task

and more likely to accomplish it, so as to effect its only legitimate object, the establishment of truth.

It may serve to illustrate the foregoing observations, to report two cases which lately occurred at the Bath United Hospital, and which were relieved by applying to them the doctrines inculcated. I shall give them briefly, waving the daily records of the hospital case book, as unprofitably tedious, and noticing only the circumstances necessary for conveying a clear conception of their progress.

Frances Anthony, aged 17, was admitted an in-patient of the hospital, on the 23rd March, 1831. She had been ill for three months, exhibited a pallid aspect, with bloodless lips, though no loss of flesh, was so weak that she could scarcely stand, and suffered intensely from breathlessness and palpitation. There was obvious curvature of the dorsal vertebræ. Opening medicines were prescribed, and rest was enjoined. Next day the palpitation was less, and she breathed more freely, owing, apparently to the continued rest. On examining the spine, there were found pain and tenderness of the dorsal vertebræ; a dozen leeches were applied; pills of colocynth and henbane were ordered at bed time, and a solution of Epsom salt in rose infusion at intervals to keep the bowels free, the stools being very foul.

On the 26th, she felt much relieved; the medicines continued.

On the 27th, the back was much better, and the palpitation greatly abated. The bowels being well purged, the pills were continued, but there being febrile symptoms, a saline mixture, with camphor and antimony, was substituted for the aperient, the latter being directed only as circumstances should require.

She continued improving till the 30th, when, from some unexplained cause, the heart was so excited, that, fearful of mischief, I directed 10 oz. of blood to be taken from the arm. She bore the bleeding well, but the palpitation was not relieved by it that evening. The coagulum presented a thin film of gluten, not amounting to buff, the serum being in large proportion. Next day she was somewhat relieved, but the palpitation continued. Satisfied, now, that there was more of irritation than of inflammatory action, and the uterine functions being irregular, I directed pills of aloes and steel, with a lightly cordial mixture, the mistura salina cardiaca of the hospital pharmacopæia, composed of sulphate of soda, carbonate of soda, aromatic confection and peppermint. Next day she was better in all respects, and the palpitation was abated.

On the 3rd of April, there was still so much pain of back, with tenderness on pressure, that the leeches were repeated.

On the 6th, cold sponging of the spine night and morning, was directed. She was allowed to get out of bed, and enjoined to lie on an inclined plane, avoiding the sitting posture, but to alternate rest with exercise.

On the 8th, the report was, back relieved; heart quiet; general improvement.

On the 9th, she was allowed full diet.

On the 10th, the only remark is, great improvement. She continued progressively amending until the 20th, when, having the opportunity of going with a family to the sea side, she was discharged free from all urgent complaint, and needing only to have her general health and strength re-established, both having been greatly improved during her stay in the hospital. She came back much benefitted, apparently free from disease, and though still weak, yet able to resume her business as apprentice to a haberdasher, which requires her to stand in the shop, and occasionally to work with her needle. The business is not suited for her languid powers, but so far as disease is concerned, she continues well to the present time.

Hannah Amos, aged 23, became an out-patient of the hospital on the 23rd of April, 1831. She had been ill two years, was very weak, being incapable of supporting the trunk of the body even for a moment, without yielding. She was depressed and despondeing, expecting no benefit from medicine, and induced to apply to the hospital only by the urgent desire of her friends. She had palpitation and breathlessness, with febrile symptoms. Some aperients and febrifuge salines were prescribed.

On the 27th, she was persuaded, by much entreaty to become an in-patient. On examination, tenderness of spine, with lateral curvature, were discovered. Eighteen leeches were applied, and the medicines continued. From these she experienced so much relief, that her spirits began to revive, and from this period there was an end of depression and despondency.

On the 29th, cold sponging was directed, and she began to use the inclined plane.

By the 5th of May, the menses, which had long been suppressed, returned.

On the 11th, she commenced the use of the shower bath, and from this period, there was little to record, save progressive amendment, until the 24th, when, being free from complaint, she was discharged. She went into the country to her friends, who live but a few miles from Bath, and had there been any renewal of disease, she would have returned to the hospital.

In each of these cases, the short period of a month sufficed to restore the party from a state of formidable disease, so as to be independent of medicine; and in the latter case, all the ordinary remedies had, by her own account, been employed assiduously, for two years antecedently, without her deriving any permanent benefit. They seem fair specimens of the kind of disease referred to, the treatment applicable to it, and the benefit which this is capable of affording.

ARTICLE III.

On Tubercular Disease of the Lungs.

BY CHARLES W. TURNER, M. R. C. S. AND L. S. A.

In speaking of tubercles, I purpose confining myself to the consideration of these bodies as existing in the lungs, and by whose presence phthisis is engendered; not that I conceive there exists any difference in the tubercular matter deposited in the lungs and that of the liver, or any other viscus; but whilst the former is almost necessarily fatal, the latter is by no means incompatible with life. The term consumption, has generally been applied in a very loose and indefinite manner, any disease of the lungs which was attended with emaciation, (and all affections of these organs are characterised more or less by that symptom,) was usually considered sufficient to stamp it as phthisis, without any reference to its cause. Laennec and others, however, have, with great propriety, restricted the term to those cases only where tubercles are present.

Tubercular phthisis forms a large proportion of the deaths in England, as no less than one-fourth of the population of Great Britain are carried off by this disease alone; in Paris it is one-fifth, and in Vienna, one-sixth. Consumption is by no means uncommon in Germany; in Russia it is rarely seen, but pleurisy is very frequent. The age which is most liable to tubercular disease, is from sixteen to thirty-five, although more advanced age is by no means exempt from it. The pecularity of constitution which favours the deposition of tubercles, agrees almost exactly with the causes of scrophula; they are strongly connected with the latter disease, and occur, for the most part, in those habits which are designated strumous.

It will not be necessary to enumerate every cause by which this disease is brought about; amongst the principal ones are, violent passions; exertions of the mind, whether from grief, anxiety, or close study; excessive evacuations, etc. etc.; but it will be sufficient to generalise it by saying, that whatever enfeebles the frame, or depresses the activity of the nervous system by diminishing its vigour, will, in constitutions predisposed, greatly favour the disease in question. The subjects of tubercular disease, are generally of a delicate frame, possessing a narrow chest, and long neck; light hair, delicate complexion, fine clear skin, which appears, in some instances, almost transparent, so that the blue veins are seen meandering in their course not unlike the streaks in delicate marble; the eyes large, and the conjunctiva marked by a pearly whiteness. Much stress has been laid, by some authors, on the dilated state of the pupil, and long dark eye-lashes were considered by Drs. Willan and Darwin, as strikingly characteristic of this disease; generally, too, the disease in question occurs in remarkably intelligent

people, possessing great talent and high mental attainments. Professor Haviland, of Cambridge, has observed in persons threatened with consumption, a remarkable dilatation and contraction of the alæ nasi.

Phthisis appears hereditary; indeed, the hereditary predisposition to phthisis, may sometimes be so decided, as to produce it without any external exciting cause, for tubercles and ulcers have occasionally been found in the lungs of fœtuses and newly born children, who have been exempt from all such causes; much more commonly, however, it is referrible to some catarrhal affection, or some other pulmonary irritation, which has given rise to the deposition of the tubercular matter. The formation of tubercles goes on very insidiously, so much so, that neither the patient, nor his friends take much notice, till they have made considerable advancement. The patient, at first, feels rather languid, and has embarrassment in the breath on a slight exertion, as, for instance, in ascending a flight of stairs, when the respiration, instead of 20 in a minute, is frequently increased to 30 or 40, owing to the impediment which the blood meets with in its circulation through the lungs. He has, for some time, a slight hecking cough, but of this he does not complain, and frequently coughs without appearing to be aware of it; at this period the cough is unattended with expectoration; there, is also, occasional oppression of the chest, or, more frequently, a fixed pain under the sternum. These symptoms may continue some time, and are merely considered the result of cold, but perhaps by taking cold, they become aggravated, and the patient is surprised by spitting up blood; the symptoms now advance with considerable rapidity, the cough becomes more and more frequent, and is accompanied by an expectoration of mucus, which gradually acquires more the character of pus, and in which we sometimes observe small whitish flocculent masses; the pulse becomes quick, 120, and not unfrequently, 140, in a minute; considerable febrile excitement; skin exceedingly relaxed, so that the patient perspires a great deal; this symptom is by no means general, and is often confined to the head and neck, or lower extremities; towards the evening, hectic flushes are observable, and the patient is unable to obtain rest; if he chances to sleep for a short time, he wakes and finds himself bathed with perspiration: emaciation, and its concomitant debility, keep pace with the symptoms, and usually towards the end, colliquative diarrhœa supervenes, which, alternating with the sweats, reduces the patient so low, that he at length sinks, exhausted. In the latter stage, dropsy sometimes takes place, either in the abdomen, chest, or what is by far the most common, anasarca of the inferior extremities. Occasionally we have slight delirium, though, more frequently, the faculties are entire to the last. The duration of the disease is various, from a fortnight to 40 years, or even longer. It is occasionally suspended for a time, and then returns. Dr. Young, in his work on con-

sumptive diseases, refers to such cases; the circumstance of pregnancy suspending it during the period of utero-gestation, is a fact well known. Whilst some trades appear to favour this disease, others, in like manner, seem to exempt individuals from it. Dr. Southey mentions that butchers, both in France and this country, and the miners in Cornwall, are remarkably free from this form of complaint.

The essential character of phthisis, consisting in the presence of certain bodies in the lungs called tubercles, it will be necessary to make some enquiries as to their origin and situation, as upon this must depend, in a great measure, the treatment to be adopted.

Dr. Baron* considers tubercles to arise in the lymphatic vessels; that they are small vesicular bodies with fluid contents, or, in other words, hydatids, and that instead of passing from an indurated to a softened state, they gradually pass through a process of inspissation, till they become quite hard, in which state, he says, there is the strongest reason to believe they do not soften, so that he considers they may, in this consolidated form, remain latent, and probably not abridge life.

M. Andral† is of opinion that tubercles are the product of a morbid secretion from the lungs, and, therefore, for these formations to take place, he considers it necessary for a sanguineous congestion to exist. He asks the question, whether this congestion is always an inflammation, in the sense commonly used by surgeons; and proceeds to say that it is not; no more than inflammation in glands exists before they secrete fluid: in the one case it is a natural function, and in the other a diseased one, together with a new deposition in the organ which is the seat of it. M. Andral says, that when there is a great disposition to the formation of a new product, the slightest congestion will suffice to bring it into action, and that wherever this congestion is repeated, the same product will manifest itself, and hence arises what is called the tubercular diathesis. He concludes by thinking, that in those cases where there exists but little predisposition to tubercular disease, a state of congestion, amounting to a degree of inflammation, is necessary for their production; but, no degree or length of inflammation will produce tubercles, if the disposition is wanting. He considers tuberculous matter to be primitively liquid, (a drop of pus) which becomes hard at an uncertain time after its secretion, forming a tubercle.

Laennec says, that under whatever form tubercular matter may be developed, it presents, at first, the appearance of a grey semi-transparent substance; this substance is hard, almost cartilaginous. Boyle also agrees with Laennec as to the primary state of tubercles, contending the reverse of what is asserted by M. Andral and Dr. Baron, namely, that they are in the commence-

* Enquiry.

† London University Magazine.

ment very hard, and from that state pass through a process of softening.

With respect to the seat of tubercles, we have as much discrepancy of opinion, as of their origin. M. Andral admits they may be situated in the air ducts, and cellular tissue of the respiratory organs. Dr. Baron says they originate in the lymphatic vessels. Dr. Baillie, in the cellular membrane connecting the air cells. M. Broussais strongly maintains that they have their seat in the lymphatic glands. Laennec thinks they are not situated in the air cells, or we should frequently see them coughed up.

By some pathologists it is believed that tubercles are the product of inflammation. M. Broussais, I believe, maintains this doctrine. M. Andral formerly did, but he has modified his opinion. Morbid anatomy has shewn that tubercles may be formed without the presence of inflammation, and we know that the tubercles in the lungs are sometimes congenital. An attack of inflammation occurring in a habit where tubercles exist, uniformly accelerates their developement and softening. We know, also, that simple continued fever occurring in constitutions predisposed to this complaint, and unattended by inflammation, will cause the appearance and rapid suppuration of these bodies. If inflammation be the cause of their formation, how is it we have no indications of its existence? We have no difficulty in ascertaining its presence in other diseases, and why should we in this? It has often been said that the consumption of such a patient was preceded by an attack of inflammation of the lungs, but this, although under some circumstances possible, can be by no means common; indeed, it would be more reasonable to suppose that the tubercles were in a latent state; that the inflammation acted as the exciting cause, and was the means of calling them into action. If tubercles were the consequence of inflammation, we should frequently see them in examining the bodies of persons who have had inflammation of the lungs or pleura, yet, how rarely do we; although scarcely a subject is examined in which there are not more or less adhesions of the pleura, shewing that inflammation had existed, and left the usual product. It appears more than probable, that when the developement of tubercles follows inflammation, the tubercles themselves acted as foreign bodies, and were the cause of the inflammation, not the consequence, as asserted by some. As an illustration of this, I may advert to what I before mentioned, namely, their formation in the brain of young children, where they were never suspected, till, by their presence, acting as foreign bodies, and thus inducing inflammation. As Bayle justly observes, phthisis sometimes succeeds peripneumony, and the fatal termination is ascribed, without hesitation, to improper treatment of the peripneumony; but observation proves, that, frequently, the tubercular affection has preceded the peripneumony. That inflammation should be the means of calling dormant tubercles to activity, or assist in their more speedy developement, is not very difficult to conceive;

but that tubercles should be the absolute product of inflammation, appears to me to be a doctrine by far more easily set forth than proved.

Tubercles I imagine to be the result of a specific action, set up in a constitution peculiarly predisposed to their developement. A certain degree of increased vascularity may, and does, I believe, generally precede their formation, but quite unconnected with inflammation.

Much need not be said of the prognosis in this disease; it is in the first stage alone that our endeavours are likely to prove at all successful, and therefore we must leave no means untried by which the strength of the patient may be supported, and the various functions of the body maintained in a healthy state; adopting every measure to retard the advancement of the passive tubercles, for, if softening once commences, the patient will soon sink, unless they are very few in number. It is a remarkable fact attending this disease, that the patient seldom looks to any other than a favourable termination of his case, and during the greater part of the time his spirits are good, and he fancies he is recovering.

The principal indication to be observed in the treatment of phthisis, is to prevent the suppuration of the tubercles, or, if possible, to promote their absorption. For this purpose, all sources of excitement must be avoided; the utmost attention paid to air, exercise, and diet, which should consist of articles of a nutritious kind, as easily digestible as possible, and devoid of any heating qualities. Farinaceous food with milk, particularly ass's milk, light broths, animal jellies, or plainly dressed meat, seem to answer this purpose best, and may therefore be allowed. There is not, perhaps, a more important auxiliary, than enabling the patient to breathe a pure atmosphere, and to those who have shewn any *predisposition* to pulmonary disease, and whose circumstances will allow of it, a change of climate will be attended with beneficial effects. The Island of Madeira has long been considered the best, both from the mildness and equability of its temperature. Dr. Clarke* says, "the mean annual temperature at Funchal, the capital of the island, is 64°, which is only 5° warmer than the Italian and Provençal climates. This very moderate mean temperature, relatively to its latitude, arises, however, from the summer of Madeira being proportionably cool, whilst the *winter* is 20° warmer than at London, the *summer* is only 7°; and whilst the *winter* is 12° warmer than at Italy and Provence, the summer is only five degrees cooler." From this warmness of the winter and coolness of the summer, and from its being exempt from the keen cold winds, Madeira is probably inferior to no other climate, where pulmonary disease is *threatened*, or where strong family predisposition to it exists or is acquired. But, too much discretion cannot be exercised in selecting those cases only, where the disease is in its incipient

* On Climate.

state: in those instances, the accounts we receive from the resident physicians in that island, are highly encouraging. In many cases, much good has resulted, by confining the patient during the winter months, to two rooms of a regulated temperature, from 60° to 65°; this will be often sufficient to relieve the symptoms very materially, particularly in scrophulous habits. Much good will accrue from attention to warm clothing, and it will be found serviceable for the patient to wear flannel next his skin, so that an uniform warmth of the body may be maintained.

Having now considered the general means to be pursued, it remains to speak of the medicinal remedies that have been found most serviceable. Iodine, from its causing the absorption of glandular enlargements and tumours, has been recommended in this disease. Dr. Baron has related a case where it was employed, and, as far as one case goes, it would seem to prove its use. I have seen it freely employed both by itself and in combination, and, although in many diseases I can speak favourably of its powers, yet, in this, I never saw any advantage derived from its use. The practice of inhalation of its vapour has been tried by Dr. Elliotson,* who says, "I have not even found such temporary benefit under iodine, as would give me very sanguine hopes." Not so with chlorine, however, for the inhalation of this vapour, has been attended with a different result. Dr. Elliotson is of opinion that it is a very useful means of relief, he has used it with considerable alleviation of the symptoms, indeed, the "amelioration has been such, as I never observed under narcotics of any kind." Some cases that could not bear iodine at all, were able to bear chlorine. One case he mentions, is that of a lady, who was able to inhale chlorine, but could not bear the smallest portion of iodine. The effect, in this instance, has been such, that her cough is nearly gone, and the expectoration reduced in a very great degree. Emetics have been recommended by Dr. Bree, but have not proved successful in the hands of other practitioners; if they are employed, it should be those which act primarily on the stomach, (the sulphate of zinc, etc.) as it is important to avoid all causes by which debility may be induced. A great point in the treatment of phthisis, will be to keep the tubercles in a quiescent state; counter-irritation, therefore, as most likely to fulfil this indication, first demands attention. With this view, setons, issues, perpetual blisters, and the tartar emetic ointment, have been recommended, the last of which, I consider, stands pre-eminent. The good effects to be derived from this remedy, I feel convinced, in many instances, are lost, from the circumstance of the practitioner and the patient being too often satisfied with the presence of a few scattered pustules. To derive advantage from this application, a full crop of pustules should be produced, and constantly kept up, by rubbing small quantities of the ointment between

* Medical Gazette.

the pustules; some pain, of course, will be the consequence of this measure, but when the eruption is sufficiently far advanced, this is greatly relieved by the application of a soft poultice. To whatever extent the remedy has been employed, I never yet saw any ill effects arising from it; indeed, I could not but remark the unusual quickness it manifested in healing, as soon as the eschars had separated. In cases very far advanced, and where this ointment has been freely applied, I have invariably seen it afford relief to the cough and difficulty of breathing; and two or three cases of incipient phthisis have been arrested in their progress. Certainly, other remedies were used in conjunction with it, still, I cannot but ascribe a great portion of the good effects which resulted in these cases, to the use of the counter-irritation, by means of which a copious discharge was kept up from the chest. It is now pretty generally admitted that *incipient* cases of tubercular phthisis may sometimes be cured; a very excellent case of which is referred to in one of the numbers of Dr. J. Johnson's Journal, which number I do not at present remember, but it was the case of a physician, whom I knew a little of myself. This gentleman had symptoms of phthisis, such as would not admit of doubt; these were subdued some three or four years before his death; which took place about two years since, from disease of the heart. On examining the lungs, extensive cicatrices were found, shewing to what extent disease had existed. I cannot say, in these cases, where tubercles are formed and where their progress has been arrested, whether they are absorbed or not; I should think not. We frequently see in inspecting the bodies of persons who have died of some other disease, tubercles in the lungs, although no symptom was manifested during life, whereby a suspicion of their existence could be entertained. If, then, as Dr. Baron says, tubercles may pass onwards towards consolidation, (provided they be not very numerous,) and if, in this consolidated state they may exist, and not shorten life, a free counter-irritation will be the most likely mode to favour this process, and therefore the propriety will at once be admitted. Our attention must next be directed to the cough, and supporting the strength of the patient.

It has often occurred to me, whether the rubbing the tartar emetic into the system, may not have been of some service in alleviating the pulmonary symptoms, independent of the irritation it excites on the skin. The hydrocyanic acid, in the first stage of phthisis, seems to give some relief to the cough; it also diminishes the tendency to hectic fever, and favours sleep without sweating. As phthisis advances, and the hectic fever increases, the mist. ferri composita has been recommended, but not with much advantage, as it frequently increases both the cough and dyspnœa. In some cases where the sulphate of quinine can be borne, it will prove useful, but occasionally the same objection applies to this, as to the former. If inflammation of the lungs or pleura should supervene, great caution must be exer-

cised in the use of the lancet: when inflammation exists, of course we are not to be deterred from abstracting blood; but the strength and constitution of the patient, together with the severity of the symptoms, must be well considered. From the quickened state of the circulation, and from the difficulty with which the blood is transmitted through the diseased lungs, we frequently have some small blood-vessel give way, but hemorrhage rarely takes place to any considerable extent. For the relief of this symptom, as well as from considering the origin of tubercles ascribable to inflammation, small bleedings have been had recourse to; this I have seen practised in two or three cases, and in each case it appeared to me to accelerate the death of the patient: it may be proper to observe that, in one of these instances, the blood was buffy every time it was drawn, indicating, in my opinion, any thing but its abstraction. One of the most important remedies we have in this disease, is, without doubt, digitalis, but, like many other useful agents, its powers have been greatly over-rated. The tincture is the best and most manageable form, it is particularly serviceable in combination with the wine of the seeds of colchicum, in doses of ten minims of the former, and twenty of the latter, two or three times a day, to be sparingly increased. This will be found to afford much relief. The night sweats which so harrass and debilitate the patient, will be best relieved by the dilute sulphuric acid; this may, with propriety, be added to the digitalis and colchicum, for, whether the patient perspires a great deal or not, there is always more or less of febrile excitement, and it never fails to be a grateful addition. The simple decoction of sarsaparilla, forms a very good vehicle for the exhibition of these drops, as it is devoid of any stimulating properties, and gives strength to the patient; or, if more pleasant, the infusion of roses may be substituted; occasionally, the decoction of Iceland moss has been recommended, which has previously been deprived of a portion of its bitter principle, by macerating the moss in water. The superacetate of lead frequently relieves the cough, when every other remedy has failed; it may be given either in the fluid form, as with sarsaparilla, or, what is better, united with the extracts of conium and hyoscyamus. There is little occasion, generally speaking, for administering any aperient medicine: when such is required, it must be of the mildest description: unfortunately we have to contend, sooner or later, with the opposite state, in this disease. A most valuable remedy is opium. It is a remedy not indicated in the first stages of this disease; indeed, it proves rather injurious than beneficial, and should not, therefore, be prescribed till other remedies fail in mitigating the symptoms, more especially as it is the only means left by which the sufferings of the patient can be alleviated. However, when it is given, it should be in such doses that the individual may derive the fullest advantage from it. In the colliquative diarrhœa which marks the last stage, this medicine will be found invaluable; by means of opium, chalk mixture and kino, this symptom

may be pretty well kept under; or, if it is very distressing, injections of starch, with laudanum, should be thrown up. Opium should be administered immediately before the accession of the evening paroxysm, it will then relieve the intensity of the hectic symptoms. When the patient feels very languid, æther or ammonia may be given, according to the symptoms.

ARTICLE IV.

Cases of MENINGITIS, *co-existing with, and obscuring the signs of, Bronchial Inflammation.*

BY CHARLES HASTINGS, M. D.

WHOEVER has paid attention to bronchial affections, must have been struck with the frequency of the connexion between them, and disorders of the cerebral system. It not unfrequently happens, that this connexion becomes the source of considerable embarrassment to the practitioner; for not uncommonly the affection of the centre of the nervous system exercises so much control over the symptoms of disordered functions of the respiratory organs, that the ordinary signs which are produced by disease in the latter, either do not appear at all, or glimmer so obscurely, that they are not seen but through the cloudy medium of impaired sensibility of the mucous membrane of the lungs, produced by disease of the cerebral organs. It must be admitted, I think, that this combination of disease, which so frequently ends fatally, deserves much consideration from the pathologist; but I do not find that it is a subject which has been much investigated. Some interesting facts of this kind have fallen under my observation, which appear to me deserving of record, and I shall proceed to relate them, in the hope that some future labourer may find them of some assistance, in leading him on to a more correct knowledge of this complicated affection.

CASE I.—Periostitis, Meningitis, and Bronchitis. No Pectoral symptoms.

G. J. aged 15. This boy was received into the Worcester infirmary, in consequence of being affected with pain, and thickening of the periosteum, covering the bones of the upper and lower extremities. The pain in these parts was excruciating. He had leeches applied to the diseased parts, and took calomel and opium every four hours. He derived little or no relief, but emaciated gradually in excruciating torture, and deeply-seated suppuration took place after a short time, in the most painful parts of the legs. The pericranium, also, became affected, and suppuration of the anterior part of the scalp took place. Not long after this latter occurrence, he complained very much of his head, and was observed to talk, at times, rather incoherently, and at length muttering delirium came on; after which he fell into a

state of coma, and died. During the whole progress of the case, he was quite free from cough, and had never any observable affection of his breathing, excepting what occurred during his dying struggles.

Examination of the body.—On removing the skull cap, the dura-mater adhered very firmly to the inner table of the cranial bones. The dura-mater was more vascular than natural. There was considerable thickening and discolouration of the arachnoid membrane, and some serous fluid was effused between it and the pia-mater; the blood-vessels of the latter membrane were congested with blood.

The vessels of the brain appeared too full of blood, and there were about two ounces of limpid fluid in the lateral ventricles.

The cerebellum was healthy.

Thorax.—The pleura was not at all diseased. There were no tubercles in either of the lungs, but the cellular substance of the left lung was firmer than in a state of health, and its blood-vessels were very much congested.

The trachea, when divided, was found full of mucus mixed with pus, but the membrane lining this part was neither thickened, nor did it appear at all inflamed.

On tracing the bronchial ramifications into the left lung, the mucous membrane lining these parts appeared highly diseased, being nearly of a scarlet colour and much thickened. The air-cells, also, here, were completely clogged up by pus and mucus.

The mucous membrane lining the bronchial ramifications of the right lung, was not inflamed.

The heart was healthy.

Abdomen.—The liver was rather enlarged, as were also some of the mesenteric glands, but the other abdominal viscera were free from disease.

Observations.—We may first remark here upon the great disposition of the inflammatory action to traverse the membranes of the body: but by far the most striking circumstance, to my mind, in this case, is the degree of mischief that occurred in the mucous membrane of the left lung, which was so great, as apparently to have rendered that important organ unfit for its office; and yet, during life, there was not one symptom to lead to the supposition that there was any inflammatory action going on in the chest. This absence of symptoms must, I think, be attributed to the state of the membranes of the brain; the diseased condition of which, so modified the local sensibility of the bronchial membrane, and so diminished the impression of inconvenience that would otherwise have been produced on the brain by the inflamed bronchial membrane, that the cough and difficulty of breathing did not come on. Or, perhaps, in other words, the functions of the brain were so affected by the inflamed condition of its membranes, that the organ was not sensible of the mischief in a distant part.

There is one question which occurred to me in this case, and has also in others of a similar nature, as being difficult to answer satisfactorily. What becomes of the muco-purulent matter that must be abundantly secreted by so extensively an inflamed bronchial membrane? Is it absorbed by the lymphatic and venous vessels, after it has been poured out by the arterial capillaries? Or does the muco-purulent matter find its way through the rima glottidis, and pass down the œsophagus into the stomach? The more probable supposition appears to be, that the mucous membrane of the lungs has great powers of absorption, as well as of secretion; and thus, under some peculiar circumstances, inflammation of the bronchial membrane may, for a length of time, go on, and a considerable quantity of muco-purulent matter be secreted from it, without any cough, or difficulty of breathing, being thereby produced.

Case II.—Serous Apoplexy the effect of Chronic Meningitis. Bronchitis. No cough after the apoplectic seizure.

T. L. aged 70, labourer. This man had formerly been a soldier, and had seen hard service. He had been for several years subject to cough. He went to his usual occupation at day work, on the 16th of May, 1822, and suddenly became speechless. He was seen soon afterwards by a medical man, who took some blood from his arm. Two days thereafter, he became a patient of the dispensary, and I visited him. He was insensible, moaned very much, and one-half of his body was paralyzed. The pulse was 60; tongue much loaded; abdomen tense. He had no cough, nor any other pectoral symptom.

I had him cupped, and a large blister was applied between the shoulders; and I precribed him five grains of calomel every four hours, which purged him very freely, and the stools were very dark and offensive. In a few days the calomel affected his mouth, after which, he appeared rather to recover his speech and the use of his limbs.

He went on gradually improving for nearly three weeks, during which time, no pectoral symptoms were noticed. Suddenly one day, he had a convulsive attack, which again left him perfectly comatose and speechless. Ever after, this poor man had a vacant stare in his countenance, and the fœces and urine passed from him unconsciously. It is true that he again rallied a little, indeed, so far as to have some power of speech; but his look was idiotic, and he continued not to attend to the calls of nature. In a fortnight afterwards, he had a violent return of convulsions, succeeded by increased insensibility. These convulsive attacks, after a time, became very frequent, indeed, returned almost daily, and he was gradually exhausted by them, without ever being affected by cough or other pulmonary symptoms, until his death, which happened on the 14th of August.

Examination, 14 hours after death.—The body was much emaciated. Nothing remarkable appeared on removing the

integuments of the head, excepting that the posterior part of the parietal bones, and nearly the whole of the occipital bone, seemed more vascular than natural.

The cranial bones were rather thin, and when the upper portion of these bones was separated by the saw, about an ounce of bloody serum escaped from between the membranes. The larger vessels of the dura-mater were nearly empty. The smaller blood-vessels, at the posterior part of the head, were dilated and loaded with blood. The dura-mater, in general, was thicker than natural, and, in some places, it was nearly twice its usual thickness. The longitudinal sinus was empty. The arachnoid membrane was every where thickened, but particularly in the vicinity of the longitudinal sinus.

There were several small productions, of a white colour, firmly adhering to this membrane, which varied in size from that of a millet seed to a large pea. A great quantity of serous fluid was observed between the arachnoid membrane and pia-mater.

The pia-mater was, in colour, not unlike red velvet, and contained some serosity. It was universally thickened, and, in some places, was nearly as firm as the dura-mater is usually found.

The substance of the brain proper and cerebellum, seemed healthy; there was not, certainly, more than the ordinary vascularity. The ventricles contained some quantity of serous fluid, and the plexus choroides was very pale.

Thorax.—The right lung was adherent to the pleura costalis. There was also the same kind of adhesion between the left lung and the pleura. There was also some recent lymph deposited on portions of the pleura.

The left lung contained many white tubercles, about the size of peas. The cellular substance of the lung, in which they were deposited, was hepatized, and contained much bloody serum.

In some portions of the superior lobe of the right lung, there were tuberculous masses, of considerable size, which had begun to soften at the centre.

The other parts of the lung contained many small white tubercles, and there were also observed, three or four small masses of melanotic matter.

The mucous membrane of the trachea was healthy.

The mucous membrane lining the bronchia, in each lung, was much inflamed and thickened, and the cells were filled with mucopurulent matter.

The heart was not diseased.

The pericardium contained about six ounces of fluid.

Abdomen.—The liver, spleen and stomach, were healthy.

The intestines, in general, were healthy, but the transverse arch of the colon appeared contracted, and the mucous membrane lining this part of the intestines, was of a dark colour, and its venous trunks seemed large.

Observations.—There are some circumstances in the foregoing case, that are peculiarly deserving of comment. The dependence

of the apoplectic symptoms upon chronic meningitis, is not the least important. I regretted that I could not obtain any particulars of the previous history of this man, which could determine whether he had suffered from any cephalic symptoms before the apoplectic attack. The state of the membranes, observed after death, was such, as to lead one to suppose, that symptoms of diseased membranes must have existed for some time. The thickening of the dura-mater was very remarkable; as was also the scarlet appearance of the pia-mater: in no other instance have I seen this membrane so decidedly inflamed; and scarcely ever remarked so much serous effusion between it and the arachnoid membrane. But, why should all the symptoms of pulmonary mischief subside, when the apoplectic attack took place? Before that illness, he had always been subject to cough and expectoration; whereas, after the attack, he never coughed at all, and shewed no signs of pulmonary mischief. Did the disease in the lungs cease after the head became so much affected? No; for there was detected after death, extensive bronchial inflammation, besides numerous tubercles and hepatization of the lungs. But, the nervous centre was so oppressed by the disease going on within the cranium, that the usual signs of bronchial and pulmonary disease were not manifested. It surely is highly important to bear such facts as these steadily in mind, for, although at present our limited knowledge does not admit of our thoroughly explaining the mutual dependence of these important organs, yet the time may come, when the light of knowledge will shine more brightly, and, at any rate, our medical practice must be improved, by the patient study of such cases as the above.

Case III.—Meningitis. Softened Lungs. Diseased Bronchia.

G. I. aged 51, was first seen by me on the 3rd of August, 1822. He had been ill, as was said by his friends, of fever, for near three weeks. When I first saw him, he was very delirious, with red eyes, furred tongue, and pulse 120. He was also affected with cough, and considerable dyspnœa. There was likewise tenderness, but no pain, of the abdomen. The head was shaved; he was bled from the arm, and some leeches were directed to the head, to which cold cloths were afterwards applied. Purgatives, of calomel, jalap, and senna, were given, and when the bowels had been freely moved, an antimonial saline mixture was prescribed every four hours. The next day he was delirious, and his medicine was continued; a blister being applied to the nape of the neck.

This plan seemed, in some respects, to suit him, for he became more rational, and the cough and dyspnœa were relieved. The bowels, however, notwithstanding the use of aperients, were rather costive, and he now complained of pain over the abdomen, with greater tenderness on pressure; and he had, also, a good deal of vomiting. After this, the abdominal symptoms became more and more urgent, for he vomited almost incessantly, and com-

plained very much of pain about the umbilicus: as the abdominal symptoms became more strongly marked, those denoting disease in the chest seemed to vanish, for the cough and difficulty of breathing ceased to be troublesome.

The man continued to complain of pain in the abdomen, and to have frequent attacks of vomiting. The pulse became quicker and weaker, and the tongue more loaded; so that he at length sank into a state of stupor and died.

Examination of the body.—Head.—There was nothing unnatural in the appearance of the dura-mater. The arachnoid membrane was thickened and opake. There was a good deal of serous fluid between it and the pia-mater, and the vessels of the latter were too much loaded with blood.

In the substance of the brain, the blood-vessels appeared more numerous than usual, and the ventricles contained about an ounce and a half of serous fluid.

Thorax.—There was no adhesion of the pleura. The lungs did not collapse well, and when removed, they felt very heavy.

When the trachea was divided, there was not found any fluid in the trachea, but the membrane lining it was of a dirty yellow colour. On pursuing the ramifications of the bronchia, the mucous membrane lining these parts, had the same dirty yellow appearance. There was not a great deal of fluid in the bronchia and air-cells, but what was contained in them, looked like chocolate grounds.

The whole of the cellular tissue of the lungs appeared to be diseased, but much more so in the superior lobes than in any other parts: for the whole of these parts of the organs were much gorged with effused fluids, which had the same dark appearance as what was contained in the bronchia. A great portion, too, of the superior lobes of each lung, had become of a dark brown colour, and was so exceedingly soft, that those parts of the lungs readily broke down into a pulp.

In neither the middle nor the inferior lobes of the lungs, did we remark this same appearance, although there the blood-vessels seemed to be very much congested, and the tissue much softer than is natural.

The abdominal viscera shewed no marks of disease.

Observations.—This case appears to me still more interesting than either of the preceding. When I first saw this patient, there were decided symptoms of mischief going on in the head and thorax, and the treatment was directed accordingly. It seemed to have the desired effect, and the symptoms gave way, but were succeeded by those indicating disease in the abdominal viscera, which gradually proceeded until life became extinct: but, on inspection, it was found that these abdominal symptoms did not arise from any local disease there, but they were proved to have been symptomatic, only, of the disease in the cerebral system. And, on the other hand, the cessation of the symptoms of disease within the thorax, did not proceed from any mitigation of the dis-

eased action going on there; for the disorganizing process had proceeded, at the time of death, almost to the entire destruction of the ordinary characters of healthy lung, and only left a dark-looking substance, which was readily broken into a pulp by the finger. How, then, did the symptoms subside, as the disorganization increased? We can only refer to the state of the brain for a solution of this problem, whose functions were so impaired and deadened, by the slow effusion that was taking place upon it, as very much to diminish the general sensibility of the whole system, and consequently, materially to affect those signs of distress, which, through the medium of the nervous system, the lungs are apt to shew, when they become the seat of severe disease.

But, the altered state of the mucous membrane of the lungs, was very peculiar. The dirty yellow appearance could hardly be referred to inflammatory action; yet it was evidently such an alteration of structure as rendered it unfit for its usual office.

In no instances, however, are we more frequently called upon to observe the effect which the occurrence of meningeal inflammation has, in obscuring the symptoms usually produced by inflammation of the mucous membrane of the lungs, than in children, who are often attacked with the ordinary symptoms of bronchitis, and after these have continued a certain length of time, they disappear, apparently yielding to the antiphlogistic treatment adopted by the medical attendant. It is not uncommon, under these circumstances, for a new train of symptoms now to set in, demonstrative of considerable lesion of the functions of the centre of the nervous system. The child becomes very restless; is averse from light, and starts at the slightest noise; perhaps the tunica conjunctiva of the eye becomes bloodshot, and if we do not speedily succeed in allaying these threatening symptoms, they are succeeded by others of a still more alarming character, and the scene is closed by all the horrible train of events which occur in the last stage of hydrocephalus, terminating in death. If we have not an opportunity of inspecting the body, in such a case, we are in the habit, sometimes, of saying, that the disease was removed from the bronchial membrane, and afterwards attacked the brain, and was fatal by causing hydrocephalus. But the result of my investigations, after death, in these cases, leads me to believe that, in many cases, the inflammatory affection of the mucous membrane of the lungs, is not at all relieved; but that the symptoms of bronchitis are no longer produced, because the sensorium commune is so disturbed, and its functions so oppressed, that the signs of distress, which are usually developed through the agency of the nervous system, are not remarked.

Case iv.—Hydrocephalus in a child, supervening upon Bronchitis.

A boy, aged 7, was brought to my house, having a severe attack of bronchial inflammation, as indicated by cough, fever,

and difficulty of breathing. As he was a strong healthy child, I directed some blood to be taken from the arm, and a blister to be applied to the chest. A grain of calomel to be taken every four hours, and an aperient saline mixture, with nauseating doses of ipecacuanha wine.

The next day I visited my patient, and found him still with as much fever, and the pectoral symptoms not relieved, and I therefore directed him leeches to the chest, and to continue his former medicines.

The following morning, the mother was in high spirits, the cough and difficulty of breathing having nearly left him. When I saw him, my satisfaction was not so great, as, although the pectoral symptoms had nearly disappeared, there was much restlessness, and his countenance was distressed: there was also a sudden start when my hand touched him, and he appeared in a state of alarm. As the bowels were very freely open, I hoped that, by the assistance of small doses of Dover's and James' powder, the irritation of the nervous system might be calmed. This, however, was not the case, and I was induced to apply a few leeches to the temples. After this, the child became drowsy, and there was occasional twitching of the hands and arms. The pupils, also, became dilated, and he eventually fell into a state of stupor and died. The bronchial symptoms did not return.

Inspection.—Head.—The vessels of the dura-mater were in a congested state, The tunica arachnoidea was opaque in its whole extent. The vessels of the pia-mater were very much loaded, and its capillaries minutely injected. There was no effusion between these two membranes. The substance of the cerebrum was more vascular than natural. The lateral ventricles were much enlarged, and contained about three ounces of serous fluid. The plexus choroides was pale, but the vessels, at its extremity, were rather varicose.

Thorax.—There was no inflammation of the pleura. The cellular structure of the lungs appeared not to be diseased. There was, however, a high degree of inflammation of the mucous membrane lining the trachea, bronchia, and air tubes. The membrane was much injected, and when the trachea was divided, it was found clogged up with muco-purulent matter, which was also observed to be the case in the ramifications of the bronchia. The mucous membrane lining the bronchial cells, on the right side, was most affected.

The right auricle and ventricle were much loaded with blood, but the heart was free from disease.

The abdominal viscera were quite healthy.

Observations—The cessation of the pulmonary symptoms, in this case, could clearly not be ascribed to the subsidence of the bronchial inflammation, because the inspection of the body proved that the inflammation of this part continued in great force up to the period of death. How was it, then, that for the last two days, we had no signs of pulmonary lesion? Must we not attri-

bute the disappearance of these symptoms to the condition of the brain? About that stage in the progress of the disease, in which the signs of cerebral irritation commenced, we lost all trace of severe pulmonary disease, and had apparently only to contend with cerebral lesion, which terminated in hydrocephalus.

By way of further illustration of the obscurity of the foregoing cases, I cannot do better than refer to a paper in the second volume of this Journal, which contains remarks by my friend Dr. Malden, on inflammation, in which some of its relations to the functions of the sensorium are considered. He there very judiciously and ingeniously, points out, that inflammation of an organ may proceed under certain states of the sensorium, without producing its usual disturbance of function.

"Physiologists," he says, "have inferred from experiments, and the consideration of morbid phenomena, that the ultimate molecular movement, (whatever its nature may be) that is the cause of sensation takes place in the brain, however remote the part of the nervous system may be, upon which the primary impression is made. It has also long been observed, that there are certain states of the nervous system, in which the healthy sensations are more acute than usual; and that there are also states in which these sensations are rendered obtuse. Now, the same remarks will be found to apply to many cases of morbid sensation. Pain, according to the above view, can only be considered as a modification of the molecular movement of the sensorium, succeeding a certain impression upon nerves; and if, in our diagnosis of diseases for the most part attended with pain, we look for the same degree of it in all cases, without considering the concomitant state of the nervous system, we may be frequently led into error, and blinded to the danger of our patient. This remark may be illustrated by a consideration of the phenomena of inflammation, arising in the progress of continued fever."*

The oppressed and disturbed state of the cerebral functions during continued fever, has been noticed by writers in all ages, but they have not, in general, paid attention to the important modification of the inflammatory diseases arising in organs remote from the centre of the nervous system during its progress. The drowsy state, with hot skin and quick pulse, in which some patients lie without almost any other symptom, would lead the observer to believe that there was not much inflammatory action present in the abdominal and thoracic organs, and yet how frequently do we detect such a concurrence? In the following case, it happened to a degree that was very remarkable.

Case v.—Continued Fever. Bronchitis, and Inflamed Mesenteric Glands.

I was sent for in June, 1829, to a young lady, aged 12, who had, for some time, not been well; but, two days before I saw

* Remarks on Inflammation, by Jonas Malden, M. D.—*Midland Reporter, Vol. II. p.* 91.

her, she was attacked with shivering, which was succeeded by heat of skin, quick pulse, and restlessness. She had been living in a house where several of the inmates had fever, and I had no hesitation in considering her malady as a similar attack. The usual antiphlogistic means of purging and salines, were adopted with little relief; on which account I abstracted some blood from the arm. After this, she became rather comatose, and I generally found her lying very quiet, and almost asleep. When I roused her, she conversed with me, and, during my visit, appeared free from much disease. There was no cough, nor difficulty of breathing, nor abdominal tenderness, but the skin was always hot, and the pulse 120. She remained pretty much in this state for three weeks, when the tongue became dry and brown; pulse 130. She had muttering delirium, and died.

Inspection.—Head.—The vessels of the dura-mater were more loaded with blood than natural, and there was some purulent effusion, mixed with serum, between it and the arachnoid membrane; this latter membrane was also thickened and opaque, and there was a serous effusion between it and the pia-mater. The vessels of the pia-mater were very turgid, and its capillaries dilated with blood. There was a small quantity of serum in the lateral ventricles. The cerebrum did not appear diseased.

Thorax.—On elevating the sternum, the lungs did not collapse, although the pleura, throughout all its duplicatures, appeared free from disease.

The mucous membrane, lining the trachea and bronchia, was very much injected, and the trachea, bronchia, and air-cells, were filled with a mixture of serum, mucus, and purulent matter.

There was no appearance of inflammation in the structure of the lungs, but, there was a serous effusion into the cellular membrane, and a few tubercles imbedded in it. The bronchial glands contained a caseous matter.

The heart wes healthy.

Abdomen.—The peritoneal surface of the liver was inflamed; when cut into, the organ appeared of a denser texture, and in colour, paler than natural. The mesenteric glands were a good deal enlarged, and some of them considerably inflamed. The mucous membrane of the intestines was perfectly healthy.

Observations.—Inflammation of the bronchia would appear to have been the immediate cause of death, in this instance; but, the disease passed through the progress of an ordinary case of continued fever, without much appearance of local lesion, excepting in the cerebral system, which, from the commencement of the illness, was a good deal disturbed.

I am unwilling further to burthen the reader's attention by a continued narration of facts, but, at the risk of incurring the censure of being given to dry detail, I cannot avoid stating the particulars of the following, to me, very interesting case.

Case VI.—Hydrocephalus. Bronchitis and Pleuritis, and Hepatitis.

A. W. aged 22, of dark complexion, and dark hair, was received into the Worcester infirmary on the 2nd of March, 1814. She had been ill, in some degree, for three months previously, with pain in the side and head, during which period, she had not menstruated. She attributed her attack to cold, and had been taking medicine for a length of time.

On admission, the skin was found to be very hot and dry; the tongue was brown and dry; the thirst urgent; pulse hard and full. She complained very much of pain in the head, and there was delirium, but no violence: the pupils were dilated. She complained of tenderness, when pressed in the hepatic region, and some pain, but there was no vomiting. Bowels open. She was bled to ten ounces, took three grains of calomel every six hours, and a senna mixture every four hours, till the bowels were freely moved. The head was shaved, and cold cloths applied to it; and a blister was put upon the back of the neck.

I do not feel it necessary to give the daily reports of this case, it may be sufficient to observe that, by pursuing the use of calomel, and by local bleeding from the temples and from the right hypochondrium, we succeeded, at first, in mitigating the severity of the cerebral symptoms, and in wholly removing the pain and tenderness of the right hypochondrium, so much so, that seven days after admission, appearances of recovery were very promising; but, on the 8th and 9th days, the cerebral symptoms became more alarming, notwithstanding the repetition of local bleeding from the temporal artery, and by leeches; and a blister to the back of the neck. In the evening of the 11th day, she became again very delirious; the pupils were dilated, and she complained very much of pain in the head; but the pain in the hepatic region did not recur, and there was very little tenderness upon pressure. On the 14th day, she became comatose and insensible, and died on the 16th. She had never any cough, nor other pectoral symptom.

Inspection.—Head.—The blood-vessels of the dura-mater were much distended with blood. The longitudinal sinus, also, contained much blood. The arachnoid membrane was opaque in patches. The vessels of the pia-mater were very much injected.

The vessels of the brain itself, seemed fuller of blood than natural. The lateral ventricles contained about three ounces of serum, and the 4th ventricle contained about an ounce and a half of the same kind of fluid; the membrane lining the ventricle seemed more than usually vascular.

Thorax.—The mucous membrane lining the trachea and bronchia, was much inflamed, and there was a considerable effusion of muco-purulent matter into the bronchia and air-cells. The lungs were so closely adherent to the ribs, that the pleura was torn away from these parts, on attempting to remove the lungs

from the body. There were also several masses of tuberculous matter situated in the cellular texture of the lungs, but this texture was not inflamed.

The heart and pericardium were healthy, excepting that the right auricle was dilated, and there was a small communication between it and the left auricle.

Abdomen.—There were old adhesions, which had become elongated between the peritoneum and omentum. The vessels of the small intestines were much loaded with blood, and there were occasional spots of lymph deposited on the peritoneal covering of these parts. The peritoneal covering of the stomach was adhering to the peritoneum lining the abdominal muscles.

The peritoneal covering of the liver was thickened, and it was also adhering to the adjacent parts.

The other viscera were healthy.

Observations.—The great pain in the head, and the delirium, were, throughout, the prominent features in this case. The great mischief that was going on in the abdomen, pourtrayed itself for the first few days, though obscurely, by the proper signs; but they were relieved by treatment, and never returned, although the organic lesions were very considerable after death. It is worthy of remark, that no vomiting ever occurred, although the state of the head, and of the stomach and small intestines, one would consider to be just such as usually produces almost incessant efforts to vomit. In the chest the lesions were very considerable, and extended, generally, through the textures of the lungs, for there were tubercles, inflamed bronchia, and inflamed pleura; but the obscuration of these morbid changes was so complete, that never once, during the progress of the case, did any symptom or set of symptoms arise, so as to lead one to infer, that disorganization, to any great extent, could be going on.

No one acquainted with morbid phenomena, and accustomed to reflect upon them, can fail to perceive, that the cases just related, belong to the same family as those in which affections of the brain and nervous system, take place during the progress of phthisis; in many of which, the symptoms of the latter disease are suspended, during the existence of those which are produced by lesion of the nervous system. I may instance the sudden appearance of insanity in the last stages of phthisis; an occurrence which, though rare, has been noted by many correct observers of disease. Whilst the maniacal paroxysm lasts, the phthisical symptoms are known entirely to disappear, and again to come on, if the disturbance of the nervous system subsides. I am not, myself, acquainted with any accurate account of the morbid appearances in the brain, when the patients have died under these circumstances of mental aberration; but, I think analogy leads one to suppose, that traces of diseased action would be found in the cerebral system, where so marked a deviation from the natural functions had occurred previous to death; for

Dr. Abercrombie, in his laborious and highly valuable work on diseases of the brain, has placed on record three cases in which lesions of the cerebral system occurred in phthisical subjects, that gave rise to symptoms of so decidedly cerebral a nature, that all the signs of phthisis immediately vanished.

In instituting a comparison between these cases, and those cerebro-bronchial ones I have just related, there is a circumstance strikingly deserving of comment. In my cases, the lesions both in the cavity of the head and in that of the thorax, were more peculiarly membranous, whilst, in the two first recorded by Dr. Abercrombie, the parenchymatous structures of the lungs and brain, were the seat of disease; whilst in the last, the pleura and the membranes of the brain were more peculiarly affected. In case 55, a phthisical patient who became subject to head-ache and other cerebral symptoms, sunk gradually into a state of coma and died. On inspection, there was extensive effusion in the ventricles of the brain, and complete destruction by ramollissement of the septum lucidum, fornix, part of the corpus callosum, and the cerebral matter bounding the ventricles. In the upper part of each lobe of the lungs, there was a portion, the size of a small orange, in a state of great induration, and internally presenting an irregular mass of ulceration; the lungs, in other respects, were healthy.*

In case 56, a gentleman, aged 24, after hæmoptysis, succeeded by phthisical symptoms, became, for some time before his death, the victim of convulsive affection, and fell into a fatuous state and died; the cough having ceased entirely when the cerebral signs appeared. On inspection, there was considerable effusion in the ventricles, and extensive ramollissement of the septum, fornix, and adjoining parts. Along the base of the brain, there was an extensive deposition of yellow adventitious membrane, of considerable thickness. There was extensive tubercular disease in both lobes of the lungs, with numerous large vomicæ.†

In case 57, a lady, aged 28, affected with phthisis, died rather suddenly, after signs of brain-lesion had manifested themselves. On inspection, the ventricles of the brain were distended with a large quantity of fluid, and there was extensive ramollissement of the septum, and all the central parts. About and above the optic nerves, there was a considerable deposition of coagulable lymph, in a firm dense opaque state. The lungs were tolerably healthy in their structure, but there were marks of extensive chronic inflammation of the pleura, on the right side, with considerable deposition of coagulable lymph.‡

The work of that able investigator of the pathology of consumption, the indefatigable Louis, contains much interesting matter relative to the state of the brain, and its membranes in

* Abercrombie, on Diseases of the Brain and Spinal Cord—p. 140.

† Abercrombie, ibid—p. 141.

‡ Abercrombie, on Diseases of the Brain—p. 142.

phthisis. He says, " Bien que l'exercice des fonctions cérébrales soit régulier dans le cours de la phthisie, et ordinairement même jus qu' aux dernières heures de l'existence, on trouvait néanmoins, dans la plupart des cas, quelque lésion du cerveau ou de ses annexes.* Louis then proceeds to mention, that he has frequently found preternatural adhesion of the dura-mater to the sagittal suture, granulations of the arachnoid membrane; thickening and opacity of the same part; sometimes a soft yellow membrane lying on its surface, shewing that this part, during the last days of life, is subject to attacks of acute inflammation. A serous effusion under the arachnoid, he also considers as not unfrequent.

In one-sixteenth of the cases he inspected, he found the pia-mater more or less red, thickened, and injected.

The collection of serosity in the lateral ventricles, he also discovered as commonly as infiltration under the arachnoid. He remarks, that he never discovered any accumulation in the ventricles when death occurred suddenly, which leads M. Louis to conclude, that this accumulation occurs during the agony of death.

The substance of the brain itself, is more or less subject to alteration in phthisis, according to the observations of Louis. The vessels are sometimes too much injected. Ramollissement, in its various degrees, is seen in a large proportion of cases. M. Louis does not, however, consider that there is any peculiarity in these changes of structure in the brain and its appendages; for they occur alike, in most chronic affections. " Les lésions observées dans le cerveau et ses annexes, étaient donc les mêmes à la suite de la phthisie et des autres affections chroniques: plusieurs d'entre elles se retrouvaient encore à la suite des maladies aiguës prolongées: il n'y avait de différence que dans les proportions.

Les seules altérations que nous ayons observées exclusivement dans le cerveau des phthisiques sont des hydatides et des tubercules. Nous ne considérons pas les hydatides comme une lésion propre à la phthisie; mais ce qui a été dit jusq'ici, doit porter à croire que ce charactère appartient aux tubercules. Nous avons déjà vu un exemple de cette lésion dans la moelle allongée."†

Valuable as the facts are which Louis has thus brought forward, it is to be regretted that his mind has never been directed to the path of investigation which is the object of this paper. He has no cases nor remarks at all calculated to throw light upon those modifications in the symptoms of inflammatory diseases of the thorax, which arise in consequence of the co-existence of lesions of the brain. This branch of pathological inquiry, has not, indeed, kept pace in advancement with the corresponding

* Recherches Anatomico-pathologique sur la phthisie par. P. Ch A Louis, p. 152.

† Ibid, p. 158.

physiological investigation of the functions of the nervous system in health. The physiological researches of Philip and Bell, in our own country, and of Le Gallois and Flourens, in France, have been attended with very felicitous results, and much that at the commencement of the present century, was obscure, in relation to the important functions of the nervous system, has been elucidated by their exertions. Let us hope that the day is not far distant, when a similar increase may take place in our knowledge of the pathology of the nervous system! To this end let us allow no opportunity to slip, of adding to the stock of facts we possess on this intricate subject. It is only by multiplying observations, and carefully drawing conclusions from them, that, in the present state of our knowledge of the animal economy, we can expect to make any safe progress. "Quamobrem usum," as Heberden truly observes, "tardum sane ducem, fere solum huc usque secuta est ars medendi; et nulla illustria incrementa ex ratione vel cepit, vel captura est, donec humano generi a Deo immortali tributus fuerit vir, qui quemadmodum Newtonus inanimata, sic animantia contemplando, principium illud vitæ detegat, a quo omnes naturales actiones pendent et gubernantur.*

ARTICLE V.

On the Division of Medical Labour, with some remarks on Public Medical Institutions.

BY THOMAS JEFFREYS, M. D., LIVERPOOL.

At a time when a love of innovation is so widely spread amongst all classes of society, it would be surprising if medical men were to escape altogether the prevalent infection. If they have not been so loud in their complaints as others, it is not, perhaps, because they have no grounds for dissatisfaction, but because they are, by nature and education, benevolent; and have little time to spare from the pursuits of a profession which so peculiarly delights in doing good. Whilst we see the nobleman, the man of fashion, and the enterprising merchant, each aiming at distinction in his peculiar sphere, by means as varied as their ranks, notions, and pursuits; we behold, in the medical man, an individual inspired with the admiration of nature, the love of truth, and genuine kindness to his fellow men. With these objects in view, he spares no exertions, and he fears no danger, in the laudable pursuit of professional excellence. He becomes familiar with scenes of disgust in the dissecting room; exposes himself to the perpetual risk of infection in hospitals: devotes much of his time and labour gratuitously to the poor; is exposed to every vicissitude of weather, at all hours of the day and night, and considers himself ever an humble and patient student of

* Gul Heberden Commentarii de Morborum Historia et Curatione, p. 417.

nature, sustained and rewarded by the consciousness of doing his duty, and the real and lasting gratification of seeing around him living and thankful proofs of his zeal and beneficence.

But, notwithstanding this unity of design and similarity of pursuits, some few have risen up amongst us, who differ from the main body, upon the best mode of prosecuting these objects. They consider that the barriers of division between the different departments of the profession, might advantageously be broken down; and that the distinctions which long-established custom has sanctioned, are useless to the profession, and confer no benefit upon the community. I shall, therefore, attempt to consider how far this blending of the usual professional distinctions is compatible with a medical education, and the business of a medical man's life.

In the infancy of medicine, when the knowledge of the animal functions in health and disease was very limited, and the remedies few, the whole science lay in a narrow compass, and it was not difficult for men of ordinary talents to acquire a correct knowledge of every part of it. "Medicina, quondam, paucarum fuit scientia herbarum, quibus sisteretur fluens sanguis, vulnera coirent paulatim, deinde in hanc venit tam multiplicem varietatem: nec est mirum tunc illam minus negotium habuisse, firmis adhuc solidisque corporibus; et facili cibo nec per artem voluptatemque corrupto."* But, with the increase of luxury, there has been an increase of human maladies, and the intimate connexion of medicine with the comforts and well-being of society, held out encouragement to many labourers, and their observations have gradually accumulated to such an extent, as to bid defiance to the exertions of the most industrious; for no man could now make himself master of all parts of the science, without devoting so much time to study, as to leave little for the practical application of his knowledge. The only remedy for this evil, is the division of this extensive field of knowledge, into different departments of study and practice. This division has, by common consent, given rise to the various grades and functions of the physician, the surgeon, and the apothecary. The question, therefore, is not whether it would be better for society that a thorough knowledge of these branches should be combined in one person, (which, from the extent of the science, is impossible,) but whether it be better for society, that all should possess an imperfect knowledge of the whole; or that a more perfect knowledge of its separate branches should be acquired by different individuals. There can be no doubt about answering the last question in the affirmative. In small country towns, however, where few purely surgical cases occur, it is customary for the surgeon to practice as an apothecary also; but, in doing so, he pretends to no more knowledge of medicine than a well-educated surgeon must necessarily possess. The diseases belonging to his department, often

* Senecæ Epistola, 95to.

produce constitutional disorder, which he ought to be competent to correct. An intelligent surgeon must, therefore, acquaint himself with the general principles of medicine, or often be foiled in the management of external disease, whether it be spontaneous or accidental. Again, it is for the benefit of small communities, that the apothecary should not be altogether ignorant of surgery, as, otherwise, in serious cases, life might be sacrificed from the delay occasioned by sending to a distance for surgical aid. But neither the surgeon nor the apothecary is required to attend an University, or to devote years of study to the more obscure and difficult parts of medical science, because this is the peculiar duty and province of the physician.

Thus, in all the civilized countries of modern times, the profession of medicine has been divided into the departments of medicine, surgery, and pharmacy. This arrangement has not been rapidly effected, nor has it resulted from any preconcerted plan of its professors; but, from the gradual increase of knowledge, and the general interests of society; and it cannot, in my opinion, be altered, without retarding one, and injuring the other. If it be desirable that further advances should be made in the healing art, or even that our present knowledge should be retained, too much encouragement cannot be given to that division of labour to which we owe its present state. The venerable fathers of medicine and surgery, to whom the homage of a grateful world is due, could not have been such public benefactors, had their attention been distracted by the study and practice of every part of a profession, which, whether we regard the state of the science itself, or its intimate connexion with almost all other sciences, will be found to embrace an inexhaustible variety of objects. About twenty years ago, this subject became a very lively topic of discussion among the medical men attached to the public institutions in Liverpool, in consequence of a physician, who kept an open druggist's shop for pharmaceutical purposes, having offered himself as a candidate for the vacant office of physician to the dispensary: and, as we had no by-law against his eligibility, the committee could do nothing to prevent his coming forward, for he was a regular graduate of Edinburgh, and of unexceptionable moral character. Professional courtesy was, therefore, the only ground we had to stand upon, and as the medical officers were most likely to feel tender upon the subject, it was left for them to dispute it. Many controversial letters were published, and the conclusion was, that the physician gave up his shop, and was satisfactorily elected!

For the public to have the full benefit of the division of labour for which I contend, it is clear that the best possible understanding should subsist amongst the medical men practising in the same district. They should regard each other not as hostile opponents, but as generous competitors; they should cultivate one anothers friendship, freely reciprocate the results of their experience in their respective departments, and by perfect can-

dour of communication and urbanity of deportment, increase mutual respect amongst themselves, and exalt the profession in the estimation of the public. Nothing tends more to destroy those paltry jealousies which have so often reflected dishonour upon our body, than the formation of literary and scientific societies, composed of medical men, with the view of facilitating their acquisition of the progressive knowledge of the day, by the cheap perusal of books; and of advancing each others improvement, by freely discussing at their meetings, various professional topics, where every member contributes his share of information to the common stock. This plan produces the two-fold effect of making the members more alive to the pleasing pursuit of science, and more friendly towards each other than they could possibly be, if they isolated themselves, each in the narrow circle of his own petty interests, without regard to the public welfare, or the dignity of their own profession.

In the formation of these professional societies, too great care cannot be taken to avoid including those, upon whose characters as men of honour, there may be the slightest imputation. Nothing, in my opinion, can exceed the nicety of gentlemanly feeling required in every member of our profession. No suspicion ought for a moment to attach to one of us, of being capable of the slightest deviation from the straight path of noble dealing in our conduct towards our brethren of the faculty, or towards the families with whose confidence we are favoured. Unsuspected moral character should always be the basis of friendships, without which they cannot be of long duration; and this rule is peculiarly applicable to the associations of men bound by every tie, human and divine, to be in practice as by profession, the benefactors of their species.

"Homines benevolentiâ conjuncti, primum *cupiditatibus iis*, quibus cæteri serviūnt, *imperabunt;* deinde *æquitate, justitiâque guadebunt*, omniaque alter pro altero suscipiet, neque *quidquam unquam nisi honestum* alter ab altero postulabit; neque solum colent inter se, ac diligent, sed etiam verebuntur: *nam maximum ornamentum amicitiæ tollit, qui ex eâ tollit verecundiam.*"*

I believe I may with truth assert, that there are no towns in the United Kingdom, which afford a more extensive field for medical and surgical practice, than Liverpool and Manchester, but, I am sorry to be obliged to add, that the latter place has made more rapid strides, as a school, than the former, which *ought* not to be the case, and I hope we shall, ere long, improve, as our resources are equal. Very few, I think, have any idea of the extent of gratuitous (of late called honorary) services to which physicians and surgeons gladly submit themselves in this town; last year, I believe, out of a population of about 160,000 souls, one-third of those received gratuitous medical and surgical assistance from the infirmary and dispensary, exclusive of patients

* Cicero de Amicitiâ.

in the fever hospital, workhouse, and other minor charities, under the charge of a phalanx of forty medical officers, from the hard-worn veteran, to the commencing tyro. Is it not incumbent, then, upon those who hold these situations, to be prompt and energetic, in making their situation more advantageous to the rising medical generation, than the mere routine which hospital practice affords? Do not, for a moment, suppose that I make any personal allusion to the medical officers either of the infirmary or dispensary; for the former I entertain the most unreserved respect, both separately and collectively; and of the duties of the latter, I have partaken so largely myself, that I need not speak of its excellence. I only speak as an individual medical practitioner, in a large and growing mercantile town, anxious and willing to contribute my portion of aid, to support and exalt the profession to which I belong: and I do think that a medical school, emanating from the physicians and surgeons of the infirmary, is what Liverpool is entitled to demand. I wish it fully to be understood that this laudable attempt has been made, but, as far as I can learn, it has, as yet, proved abortive. Why should it? We have men fully adequate to the task; we have a hospital equal in size and magnificence to any in the kingdom, and yet our Manchester neighbours, are, I fear, stepping before us. All I can say for myself is, that were I a physician to an infirmary, I would labour hard to establish a provincial school, and have only declined making my feeble efforts, in consequence of not being attached to a hospital; for, without clinical instruction, I consider any attempt at medical education would be fruitless. The zeal of our dispensary physicians and surgeons, I believe, is now attempting oral instruction, but the practical duties of these establishments are so extensive and imperative, that I fear it will be difficult to make it effective; besides, there is this insurmountable obstacle to dispensary practice being adapted for a school, that the cases illustrative of the doctrines of the teacher, are too widely scattered at their own homes, for close and critical clinical observation and instruction. Too much praise cannot be given to Mr. Gill, a surgeon in this town, who, without the aid of any public institution, save that of the eye infirmary, has successively and successfully kept together, a respectable anatomical class, for three or four years; and I have not the least doubt, but that if he had the aid of the clinical practice which a small hospital would afford, he would have such encouragement in every branch of a medical and surgical education, as would be properly appreciated in the metropolis.

In all medical public institutions, be they infirmaries or dispensaries, two objects appear to me absolutely necessary to be steadily kept in view; the one is, the *number* of medical officers, and the other, the *time* they should retain their situation. Upon the first, or number, as far as my experience and observation goes, they should never exceed *three* physicians, and three surgeons, which number are fully adequate to meet the most for-

midable case requiring their joint consultation, or mechanical aid; and when more are added, the difficulty of coming to the same conclusion, is in proportion heightened, so that any increased number leads to the distressing result of a want of harmony in opinion, which is ever to the disadvantage of the patient, of the profession to which they belong, and of the best interests of the charity itself. If the duties of the hospital become too oppressive, the medical officers should take the warning, and withdraw, and let those succeed, who have either more leisure or more zeal; and, if the population becomes oppressively incumbered with poor objects of disease, rather than extend the duties, and increase the number of medical officers, a second infirmary should be established. Is it not, then, reasonable and justifiable, to place all infirmaries throughout the kingdom upon such a footing, that their officers may have pecuniary remuneration for their labour, and, at the same time, be restricted partially, or wholly, from the emoluments of private practice? but, as this can only be done by parliamentary enactment, I fear we must not hope for it. And here we come to the origin of the evil, viz. that there is no profession which enjoys more private or individual influence, than the medical, and none, I think, wants it more as a body; and this for the most obvious reason, that not a single individual of our fraternity, represents us in the Commons' House of Parliament; 'tis true the Marquis of Lansdowne, Mr. Hume, and Mr. Warburton, have each shown every wish to befriend us, but however good their intention may be, they cannot feel as Sir Henry Halford in physic, and Sir Astley Cooper in surgery, would do, if they had seats in our legislature, than whom none would be more fit to plead our cause; and if this insignificant hint should meet their eye, I hope it will not be altogether disregarded. Their rank, their wealth, and their fame, at once make them characters fully suited for such an assembly. My second position, as to the time when an officer should retire, though equally necessary, may not be equally accordant to the ideas of those who are hospital physicians and surgeons, for there is, perhaps, no subject upon which it is more difficult to judge, than that of a professional man knowing himself sufficiently to select the exact and proper time when he should withdraw himself from public duties. Instances are not wanting, however, among the most celebrated of our own day, and a very conspicuous precedent is the late talented, popular, and benevolent Dr. Baillie, who only retained his office of physician to St. George's hospital, in London, for a term of thirteen years, a period, I think, it must be allowed, amply sufficient for any physician to benefit either himself, or the charity he may be fortunate enough to serve; and I must think that the very instant a great and good man finds that he can do without a hospital, or a hospital would do better without him, he is bound, as a correct member of society, to retire from such duties; although I fear it has been a matter of boast with many, that they have *served* the public in that capacity for 20, or even 30 years.

It was my intention to enter more into detail on the duties of physicians and surgeons in private and public practice, and their mode of being remunerated, but I fear I have spun out my subject to too tedious a length already, and therefore conclude.

ARTICLE VI.

On the value of accurate Prognosis, in a letter to Sir Henry Halford, Bart.

BY GEORGE E. MALE, M. D.

One of the Physicians to the Birmingham Hospital.

Sir,—Having read with much interest, the papers re-published by you, in the small volume with which you have lately favoured the profession, my conscience reproves me for not having fulfilled my intention of communicating to you, a case of ischuria renalis, which I did intend to submit to your perusal at the time it occurred. I considered this communication due to you, as it was to your observations on that disease, contained in an early volume of the Medico-Chirurgical Transactions, that I was enabled to deliver a prognosis at the very commencement, of the only instance of it I at that time had ever seen. I will give the case, without comment, as I find it in my note book.

—— Dyer, a publican, aged 65, neither fat nor bulky in stature, temperate, and generally healthy, was seized on Monday, 7th of May, 1821, with pain in his bowels, for which he took, tincture of rhubarb, castor oil, and salts, at different times, which purged him considerably; he passed no urine, nor did he feel any inclination to do so. The next day he was free from complaint, and rode on horseback 3 or 4 miles, without pain or inconvenience. I was called to him on Friday, the 11th, on account of the cessation of the secretion of urine, and found him apparently in perfect health, without pain, or great uneasiness of any kind, nor had he experienced any since Monday. There was no swelling of the legs nor abdomen, nor any fulness of the region of the bladder,; but he experienced a dull sense of weight about the kidneys, and almost a total suppression of urine. The quantity passed since Monday, (4 days) did not exceed half a wine glassful, but it was clear, and of natural appearance, unmixed with gravel. He had experienced former attacks of this kind, and vomiting relieved him; he had formerly passed gravel. His bowels being costive, I ordered him one grain of the extract of elaterium, having often observed its good effects in exciting the action of the kidneys; the warm bath was proposed, but he objected to it, as it had done him no good on former occasions, therefore fomentation of the loins was substituted, and the following mixture or dose.

℞ Aquæ fontanæ. Aquæ menth. piperit. aa ℥iij. Potassæ supertartratis, ℥i. Spt. ætheris nitrici, ℥ss. M capiat coch duo larg. tertia quâque hora.

12th.—The pill of elaterium had but little effect on the bowels, but excited some vomiting. No urine passed.

Recollecting a case recorded in the Medico-Chirurgical Transactions, by Sir Henry Halford, I apprised the patient's friends of his danger, and foretold that he would, in a few days, become senseless, and die as if by apoplexy. Seeing no appearance of any great deviation from health, my prognosis was received by them with silent doubt. The elaterium was repeated in the same dose, and I took care to ascertain that it was genuine. A catheter was introduced into the bladder, but very little urine followed. Repeat the mixture. ℞ Tinct. digitalis, ℥ss. Tinct. Lyttæ, ℥i. M sumat guttas LX. tertiâ quâque horâ ex decoct avenac cyatho.

Having no thirst, he is unwilling to drink. Pulse 86, soft but full; some stupor and drowsiness is experienced. Mitt. sanguis ad ℥xiv. et appl. emplast. lyttæ largum lumbis.

13th.—The bladder again examined with the catheter; no urine followed, nor has more than half an ounce been passed. Still no pain. Blister rose well, and discharged much. The elaterium produced two or three stools; much nausea, and some vomiting. Continue the medicines. Stupor increases. Repet. venesectio ad ℥xii.

14th.—No urine. Apoplectic symptoms come on; his eyes staring and fixed; totally unconscious, and unable to take medicines; apparently no pain, but he is bathed in profuse perspiration, which has a very strong, and somewhat urinous smell. Pulse 76, full and soft. He continued in this state till the next morning, when he died.

Dissection.—Thirty hours after death, the body was opened by Mr. Russell, who attended the patient with me. The *right* kidney was much enlarged and inflamed. The tunica adiposa was more than usually loaded with fat, of a dark red colour, and exhibited marks of considerable inflammation. The upper part of the ureter was blocked up with loose sabulous matter, a quantity of which was also found in the pelvis of the kidney, and in the infundibula, but not of a size much larger than the head of a large pin. The upper part of the ureter and the pelvis, contained a small quantity of urine. The *left* kidney was almost entirely absorbed, and had evidently long since ceased to exercise its functions.

In the only infundibulum which remained, was impacted a small calculus, about the size of a pea. The ureter was pervious. The bladder was healthy, and contained a small quantity of urine. The urethra was in its natural state. The liver and other abdominal viscera were sound. We were not permitted to examine the head.

As I believe there are not many cases recorded, similar to those already communicated by you to the College of Physicians, I trust that this addition to them will not be unacceptable to the public. I have the honour to be, Sir,

Your obedient, humble Servant,

Birmingham, Sept. 1831. GEO. EDW. MALE.

ARTICLE VII.

Cases of Aneurism.

BY J. M. BAYNHAM,

Surgeon to the General Dispensary, and to the Town Infirmary of Birmingham.

Case of Aneurism of the Coeliac Artery, with Stricture of the Aorta.

Thomas Hart, aged 35, a labourer, became a patient of the dispensary in the month of April, 1817. He had then been indisposed four months; complaining of pain in the stomach, flatulence, constipation, and, latterly, of much distress in voiding his urine. He was a man of irregular habits, and attributed his illness to intemperance, wanting oftentimes the common necessaries of life, and at others securing to himself the fallacious compensation of unrestrained indulgence. Being soon relieved by the use of medicine, he returned to his employment, and I did not see him again for nearly two months. He was now considerably worse; had frequent vomiting, both of the ingesta and of the secretions of the stomach; severe pains in the epigastrium, which, although at one period relieved by the presence of food, eventually became aggravated by the mildest articles of nourishment; his appetite, however, did not fail. Obstinate constipation called for the more frequent use of purgatives; the only medicines by which his case was benefitted. His rest was at all times disturbed; and this more particularly when influenced by opiates. There was not either tumor or tenderness of the abdomen, but, on the contrary, he was relieved by pressure; in order to maintain which he generally observed a recumbent position upon the belly, or, when seated, an inclination of the body forward, resting upon his knees with his arms folded. A few days previous to his death, my attention was directed to a beating in the pit of the stomach, correspondent with the action of the heart. Pulsation was clearly manifest, but not to be identified with any sensible tumor. He was still harrassed by a difficulty in making water, and now complained much of shooting pain in the left shoulder. Although greatly emaciated, he continued to walk out until the last week; and kept his bed only within the last two days of his life. Five hours before death, pain in the region of the stomach became excruciating; restlessness and the expression of anxiety increased; he was perpetually endeavouring to ease himself by a discharge of urine; until at length the powers of nature failed—the pulse became indistinct—the complexion pallid, and the surface cold. A short period of tranquillity preceded the final event.

Dissection.—The viscera of the different cavities of the body were found to be healthy. The stomach and the urinary blad-

der, parts to which all distress had been referred, presented not even the appearances of irritation. Blood was effused underneath the peritoneal coat of the stomach, and in the cellular substance about its lesser curvature. The bowels were pushed from the right side by an amazing extravasation of blood behind the peritoneum, extending upwards even into the posterior mediastinum. The kidney was imbedded in a large coagulum, which had loosened the fibres of the psoas muscle, and descended, behind the rectum, to the lowest part of the pelvis. This occurrence had resulted from the rupture of an aneurism, somewhat larger than a duck egg, formed, chiefly, by dilatation of the coeliac artery. The only portion of the aorta engaged in the formation of the sac, was that situated in front of the vessel between the openings of the coeliac and superior mesenteric arteries; so that one large aperture seemed common to both. The ordinary branches of the coeliac artery sprang separately from the aneurismal tumor, as did also the mesenteric. The interior of the sac was generally smooth and shining, but marked by numerous slight fissures. No deposition of lymph had taken place. Laceration had occurred, posteriorly, at a distance of about two inches from the connexion of the tumor with the aorta. The emulgents were given off immediately below the aneurism; and rather more than one inch lower still, the diameter of the aorta was abruptly contracted. This peculiarity, viewing it from within, might be supposed to result from the application of a thin ligature. The morbid alteration, although seated principally in the inner coat, was not confined to the lining membrane of the artery, but in some degree had led to a condensation of the other tunics, and effected the obliteration of two of the lumbar arteries emanating from this point. The stricture of the vessel resulted mainly from a *sharp ridge* of the lining membrane, and this more especially in about two thirds of the circle. The contraction of the tube, at this point, amounted to one half of its usual diameter. The vessel then immediately regained its full size, and presented no other appearance of disease. The internal surface of the arch of the aorta exhibited several white patches. The superior mesenteric artery, at some distance from its origin, formed a small aneurism, of which the coats were partially calcareous, and of which the capacity was disproportionately small, by reason of a considerable deposit of lymph.

In this case it would be interesting to determine the priority of date in regard to the stricture of the aorta, and thus account for the existence of aneurismal disease above the contraction. It is true that other appearances of a morbid character were observed in the arterial system, but none such as to render the explanation improbable, more particularly when a tendency to aneurism, as evinced elsewhere, is shewn to have existed. The increased secretion of urine, and sympathetic irritation of the bladder, with all the distress experienced in this part, may be

fairly supposed a consequence of determination of blood to the kidneys; the emulgent arteries being situated above, and so nearly adjoining, the constriction described. Without an injection of the subject, and more deliberate examination than is practicable in a private house, it was impossible to ascertain the relative proportions of the mammaries, the epigastrics, and other inosculating arteries. The morbid parts have been preserved.

Case II.—Aneurism of the Aorta, with Obliteration of the Right Subsclavian.

Wm. Taylor, aged 45, a labourer, was admitted into the infirmary, Nov. 30th, 1830. Although not in good health, he worked the day previously. He was a tall muscular subject; and, when admitted, complained only of cough, with difficulty of breathing. In a few hours respiration had become so much more embarrassed, that 14 ounces of blood were taken from the arm; and a larger quantity the following day. Dyspnœa, nevertheless, increased: his features became bloated, and his complexion a deep purple. Slight œdematous swelling of the legs occurred. Cough, unattended by expectoration, harrassed him incessantly. He had sense of weight and constriction in the chest, but no pain. There was not any extraordinary action of the heart; and the pulse of the wrist was regular, but without any such degree of fulness as the appearances of the case would indicate. A large blister, applied to the chest, relieved him more than venesection; this relief, however, proved of short duration, for the next day (Dec. 2nd) all the symptoms were aggravated. Bleeding was again practised; and, under an impression that squills might operate beneficially, either as an expectorant medicine, or as a diuretic, (since hydrothorax was threatened) the oxymel and tincture were pushed to some extent; and, in the evening, an infusion of digitalis was also prescribed. The violence of his cough frequently induced vomiting.

Dec. 4th.—The pulse had now become so far enfeebled that I could no longer venture to abstract blood; and, in fault of any other indication, recommended a second blister. In the course of the night he spat blood; and quickly afterwards, when calling for assistance, had such active hæmorrhage by the mouth, that in less than ten minutes five pints of blood were lost. Death immediately ensued.

Dissection.—The stomach contained half a pint of coagulated blood; the duodenum a lesser quantity. In other respects the abdominal viscera presented no unusual appearances. The lungs were fully distended, and, in point of structure, quite healthy: the air tubes filled with bloody serum. A large aneurism was discovered in the arch of the aorta. The carotid and subclavian of the left side, originated from a portion of the vessel not comprised in the formation of the aneurismal sac. The enlargement of the aorta was irregular; it commenced somewhat lower than the origin of the innominata, and extended to the point from

whence the large vessels were given off to the left side. The arteria innominata formed a part of the tumor; its opening into the aorta being of little less diameter than the other parts of the sac. The right carotid arose, as usual, from the innominata, which, immediately beyond this point, and where it forms the subclavian, had become a solid tumor the size of a large walnut. The parietes of the vessel were thickened, and otherwise diseased; a considerable deposition of steatomatous matter having taken place between the inner tunics. The interior of this particular part of the sac was filled with a pale indurated coagulum, exactly moulded to the space which contained it, and from whence it could not be extracted without injury to the preparation. The subclavian artery was obliterated; but the vertebral, although partially closed by the coagulum, was still capable of transmitting some blood to the head. The remains of other branches of the subclavian were observed, but all of them had been rendered impervious. For the purpose of conducting the examination with greater care, the morbid parts had been conveyed away; and it was not until too late for additional investigation, that I became aware of the necessity for new channels, whereby the extremity derived its supply. The coats of the arch of the aorta were less diseased than those of the innominata and subclavian. With some degree of thickening there was simple dilatation; and, in this principal portion of the sac, a want of coagulum. The aneurism had ruptured into the trachea one inch above the bifurcation of this tube.

Case III.—Femoral Aneurism, not cured by Ligature of the Artery.

Thomas Brookes, æt. 20, admitted into the infirmary March, 1826, had a large femoral aneurism, the consequence of accidental wound with a shoe-maker's knife, three years previously. Profuse hæmorrhage occurred instantly; the escape of blood by the external wound, was, however, soon checked by an immense extravasation, which caused immediate swelling from the knee even to the hip. This swelling gradually subsided into a pulsating tumour, situated about the middle of the thigh, for the relief of which, he had consulted several practitioners in the country. When he came under my care, the aneurism was larger than a man's fist, and the limb altogether more bulky than its fellow. The veins of the whole extremity were exceedingly dilated and knotty, and in one large varix just above the inner ankle, distinct pulsation was observed, with a peculiar whizzing motion of its contents, constituting, as nearly as possible, the indications of an aneurismal varix. Compression of the inguinal artery not only lessened the size of the aneurismal tumour, but effectually subdued all motion in the varix particularly mentioned. The venous circulation of the limb appeared to be carried on exclusively through the superficial veins.

March 10th.—He submitted to an operation, during which, in consequence of a difficulty experienced in the separation of the artery from the vein, the latter was punctured upon the end of the needle, and a copious flow of blood ensued, but shortly ceased, and gave me no further trouble. The vein was situated beneath, and somewhat to, the outer side of the femoral artery, which was tied with a single ligature, about two inches below the usual origin of the profunda, and as nearly as practicable to the aneurismal sac. The case proceeded favourably, until after a spontaneous separation of the ligature upon the eleventh day. Supposing that all danger was then removed, he most unwarrantably sat up in bed, and moved without restraint. In the course of the night, twenty hours after the ligature had been detached, half a pint of arterial blood escaped from the wound, and nine hours afterwards, at least a pint more. Pressure upon the groin, succeeded in arresting any further discharge at the moment, and moderate compression of the wound obviated a recurrence of this alarming evil. The wound healed slowly. Pulsation was detected in the varix, near the ankle, at the end of the 4th day, but, as the veins in general became less conspicuous, this also diminished, yet motion was still perceptible when he left the infirmary. The foot alone did not recover its natural temperature, until three weeks after the operation. At one period, slight vesications occurred upon the toes, but the use of flannel rollers, and warm sand bags to the foot, restored a healthy action to this part. The contents of the aneurism never coagulated, nor did the tumour materially decrease. Slight inflammation of the integuments was set up in the third week, and fluctuation was distinguished in the tumour, so that maturation became a probable event; this, however, did not take place. A vague pulsatory motion was detected in the sac, about a month subsequent to the operation, which indistinct sensation was converted into regular, yet feeble, pulsation, at the expiration of another fortnight. After remaining in the infirmary ten weeks, he was discharged by his own request, and resumed his occupation. I had an opportunity of seeing him in the following year, and found the tumour stationary, with the same feeble pulsation.

The ligature, in this case, separated unusually soon, and thus favoured the occurrence of arterial hæmorrhage, which might, nevertheless, have been avoided, but for the misconduct of the patient. Displacement of the clot, in all probability, resulted from the vicinity of a branch of the artery to its divided extremity. The renewed passage of blood through the sac, must have been occasioned by the anastamosis of a branch, perhaps of the profunda, with a branch of the femoral, springing from below the situation of the ligature. This collateral channel proved insufficient to augment the tumour, and barely served the purpose of a feeble circulation.

ARTICLE VIII.

A Report of the Out-patients of the Birmingham Infirmary, attended by Mr. Parsons, *from January* 1st, 1831, *to March* 25; *and from March* 25, *to June* 25.

DISEASES.	*Quarter ending March 25.*	DIED.	*Quarter ending June 25.*	DIED.	*Total.*	DIED.
Abortus, ...	1	...	1	...	2	...
Abscessus, ...	9	...	18	...	27	...
——— Psoaticus, ...	1	...	—	...	1	...
Amaurosis, ...	1	...	—	...	1	...
Amenorrhœa, ...	4	...	8	...	12	...
Anasarca, ...	2	1	—	...	2	1
Aphthæ, ...	2	...	3	...	5	...
Apoplexia, ...	—	...	1	...	1	...
Asthenia, ...	16	...	35	...	51	...
Bronchitis, Acuta, ...	3	...	2	...	5	...
——— Chronic, ...	56	2	62	4	118	6
Calculus, Vesicæ, ...	—	...	1	...	1	...
Catarrhus, ...	60	...	47	...	107	...
——— Epidemic.	—	...	158	1	158	1
Cephalæa, ...	13	...	18	...	31	...
Chorea, ...	—	...	1	...	1	...
Constipatio, ...	32	...	60	...	92	...
Convulsiones, ...	3	1	4	2	7	3
Cynanche, tonsillaris, ...	6	...	6	...	12	...
Dentitio, ...	11	...	6	...	17	...
Diarrhœa, ...	28	...	29	2	57	2
Dyspepsia, ...	39	...	43	...	82	...
Dysuria, ...	—	...	4	...	4	...
Enterica, ...	3	...	4	...	7	...
Entropion, ...	—	...	6	...	1	...
Epilepsia, ...	3	...	9	1	9	1
Erysipelas, ...	2	...	4	...	6	...
Erythema nodosum.	4	...	1	...	5	...
Fungus medullar.	—	...	1	...	1	...
Fracturæ, ...	3	...	6	...	9	...
Gangrœna, ...	1	...	—	...	1	...
Gonorrhœa, ...	26	...	27	...	53	...
Hæmatemesis, ...	3	...	1	...	4	...
Hæmaturia, ...	—	...	1	...	1	...
Hæmoptoë, ...	2	...	4	...	6	...
Hæmorrhoides, ...	8	...	3	...	11	...
Hernia, ...	2	...	1	...	3	..
——— Humoralis, ...	1	...	—	...	1	...
Hydrocele, ...	1	...	—	...	1	...
Hydrocephalus, Ac.	1	1	—	...	1	1
Hysteria, ...	2	...	4	...	6	...
Icterus, ...	1	...	2	...	3	...
Laryngitis, ...	4	2	—	...	4	2
Leucorrhœa, ...	2	...	3	...	5	...
Lepra, ...	2	...	2	...	4	...
Lumbago, ...	7	...	8	...	15	...
Mania, ...	5	...	7	...	12	...
Marasmus, ...	2	1	4	1	6	2
Menorrhœa, ...	1	...	3	...	4	...
Neuralgia, ...	3	...	3	...	6	...
Œdema, ...	—	...	1	...	1	...
Ophthalmia, ...	2	...	5	...	7	...
Paralysis, ...	4	...	4	2	8	2
Periostitis, Chr.	—	...	1	...	1	...

DISEASES.	Quarter ending March 25.	DIED.	Quarter ending June 25.	DIED.	Total.	DIED.
Peritonitis, Ac.	—	...	1	...	1	...
——— Chr.	1	1	—	...	1	1
Pertussis, ...	2	...	27	5	29	5
Phlogosis, ...	10	...	16	...	26	...
Phthisis, ...	1	...	13	5	14	5
Pleuralgia, ...	5	...	9	...	14	...
Pleuritis, ...	6	...	5	...	11	...
Pneumonia, ...	21	5	7	1	28	6
Podagra, ...	—	...	1	...	1	...
Porrigo, ...	16	...	9	...	25	...
Prolapsus Ani, ...	1	...	—	...	1	...
——— Uteri, ...	2	...	1	...	3	...
Prurigo, ...	—	...	4	...	4	...
Psoriasis, ...	3	...	5	...	8	...
Purpura, ...	2	2	1	...	3	2
Rheumatismus, Ac.	5	...	8	...	13	...
——— Chr.	6	...	7	...	13	...
Rubeola, ...	14	2	3	...	17	2
Scabies, ...	3	...	9	...	12	...
Scarlatina, ...	17	4	12	1	29	5
Schirrus Ventriculi, ...	1	1	—	...	1	1
Scrofula, ...	6	...	7	...	13	...
Strictura Recti, ...	—	...	1	...	1	...
——— Urethræ, ...	2	...	1	...	3	...
Synochus vel Typhus, ...	69	2	73	3	142	5
Syphilis, ...	14	...	35	...	9	...
Ulcera, ...	17	...	22	1	39	1
Varices, ...	2	...	2	...	4	...
Variola, ...	97	14	50	2	147	16
——— Post Vacciniam. ...	10	1	12	...	22	1
Vermes Intestinal.	9	...	20	...	29	...
Vulnera, ...	4	...	7	...	11	...
Anomala, ...	23	...	25	...	48	...
	751	40	1007	31	1758	71

Anasarca.—The fatal case of this disease occurred in a boy, seven years of age. Eight months before the dropsical effusion commenced, he had a severe attack of acute rheumatism. I could not ascertain, during his illness, whether or not the rheumatism had induced any disease of the heart; and an examination of the body after death was not allowed.

Chronic Bronchitis.—Of the 118 cases of chronic bronchitis, 54 were males, of which four died; and 64 females, of which 2 died. In the first quarter, ending March the 25th, there were—males 27—2 died; females, 29. In the second quarter, ending June the 25, there were—males, 27—2 died; females, 35—2 died.

Epidemic Catarrh.—Epidemic catarrh, or influenza, appeared in Birmingham about the middle of June, and in a very short time affected a large portion of the inhabitants; no station in society, nor age, affording any security against its visitation. Its rapid diffusion over nearly the whole of this country, and its appearance, nearly at the same time, in other parts of the west of Europe, together with the remarkable depression both of mind and body which it in most instances produced, caused it to be regarded, for some time with alarm, as the probable fore-

runner of that pestilence which has committed such ravages in the east of the continent. Towards the end of July, the influenza gradually subsided in this town, having remained here about five weeks; and such, I believe, is, in general, nearly the ordinary duration, in any one place, of non-contagious epidemics. The whole number of cases of it which I attended, at the infirmary, was rather more than 230; and of these, 158, or two thirds, are given in the report as having occurred in the first fortnight, or up to the 25th of June, including that day.

At the commencement of the attack, the disease generally resembled common catarrh; but in almost all cases it began without the patient being able to assign for it any exciting cause. It was speedily, however, distinguished from cold, by the severity of the symptoms, and especially by the very striking prostration, both mental and corporeal, which it commonly induced, and which was, in most cases very disproportionate to the local affections. The pain in the head, chiefly in the forehead, was occasionally severe, and appeared to be connected with the frontal sinuses; the fauces were sore; there was much dry cough; and, indeed, the mucous membrane lining the air tubes, the mouth, the nares, &c. appeared to be a part especially affected, and was commonly in a state of considerable irritation. The pulse was accelerated, and the temperature of the skin raised. There were also present, oppression at the chest, pleuritic pains at the side, uneasiness at the prœcordia, loss of appetite, languor, and a general feeling of malaise. The symptoms, of course, varied in intensity in different individuals: in some the disease subsided in a few days or a week; in others it continued much longer, the cough and debility remaining for many weeks, chiefly in those instances where depletion had been carried to any great extent. On account, however, of the great depression induced by the epidemic, where the attack was in any degree severe, active depletory measures were contra-indicated; and in the only two cases where I felt imperatively called upon to take much blood from the arm, (in each case twice, to the amount of about 12 ounces each time) on account of the violence of the cough and pain in the side, the bleeding was evidently followed by a marked prolongation of the disease and subsequent debility.

I met with no instance of the epidemic occurring twice in the same individual. In one case it caused abortion to take place at the fourth month; and a disposition to miscarry has been observed during former invasions of influenza.. One patient died; and in that instance a disease of less severity would probably have caused death, the patient, a woman, being 92 years of age, and subject to attacks of asthma. She died on the third day of her illness.

After the first fortnight of the epidemic's appearance, the severity of the disease certainly diminished; and a similar change in its character took place, also, in the small pox of this year; as is noticed in the remark on that disease, in the present report.

This tendency, after a time, to assume a milder form, appears likewise to have been frequently, if not generally, observed in other epidemics; it is mentioned by Sydenham, in his account of the epidemic of London, in 1669; it was noticed in the plague which ravaged Marseilles, in 1720; in the plague which visited Cairo, in 1800; and in other instances.

Of the 158 cases given in this report, more than two thirds occurred in females; there were under the age of ten years,—males, 7; females, 14; above that age,—males, 40; females, 97.

Dyspepsia.—Of the 82 cases of dyspepsia, more than three fourths were met with in women; the proportions being, 19 men and 63 women. The case also of scirrhus ventriculi occurred in a woman, 54 years of age, who had for several years been subject to disordered action of the stomach. In the cases of simple constipation of the bowels, the disparity in number in the two sexes was still greater, nearly nine tenths of the patients with this disorder being women: the numbers were—10 males, and 82 females: and of the 11 cases of hæmorrhoids, 9 occurred in women, and 2 only in men. In these instances, as well as in that of dyspepsia, the cause is probably to be found in the sedentary employments, generally, of women.

Medullary Fungus.—This patient is a young man, 25 years of age, a pearl button-maker, and of athletic figure. Two years ago he sprained his right foot severely; and since that time he has suffered occasionally much pain in that part, and has observed that his foot has become irregularly enlarged, chiefly on the outside. In April last, the fungus protruded through the skin of the sole of the foot; and, when it had acquired the size of a walnut, it was accidentally torn off. A violent hæmorrhage of arterial blood took place from the wounded surface; and this circumstance, together with the severe pain which he suffered, made him anxious to have the foot removed. He was, consequently, admitted into the infirmary, where I took off the limb a little below the knee. The stump healed rapidly, and he soon acquired his usual state of health. When I last saw him, three weeks since, the stump remained well, and there was no appearance of the disease being developed elsewhere. Unfortunately, the man is of intemperate habits.

Hæmatemesis.—In one of the patients, a prostitute of the lowest grade, this disease assumed the character of vicarious menstruation. The vomiting of bloody fluid recurred several times, with intervals of three or four weeks; and, during the whole period, the menstrual flux, according to the girl's account, was suppressed.

Mania.—Nine of the maniacal patients were men, and three were women. One of the men, after having made several attempts at self-destruction, which were prevented by the care of his wife, was admitted into the infirmary. Some of his relatives, however, not believing that he was insane, had him removed to their own house, where, in a few days, he eluded such vigilance as they thought it necessary to exercise, and hanged himself.

Paralysis.—M. G. 27 years of age, and married. The right side of the face was paralyzed, and quite without expression; the sensibility of the skin remaining perfect. A careful examination detected no physical cause of the affection. During the preceding week she lost one of her children, which died of convulsions; and, subsequently, she found that her husband had infected her with gonorrhœa. On Wednesday, the 23d of February, she received much harsh tratment from her husband; and on the following morning she first observed the paralytic condition of the face. The patient's health was not good; she suffered from occasional pain in the head, had indigestion, and was hysterical. She derived but little advantage from medicine; but as her health improved, and her mind became calmer, the state of her face got better. Traces of the paralysis, however, remained five or six months after the disease began. Strychnine was used; but as its remedial action was not commensurate with her wishes, she refused to persevere in its use.

June 5.—J. M. thirty-two years of age, and unmarried. This was a case of paralysis of the face, like the preceding one. In this patient it was the second attack, and each time it was produced by a similar cause, inflammation and enlargement, apparently, of some absorbent glands behind the angle of the lower jaw. The health of the patient was, in all other respects, good. The removal of the local affection having been effected, the paralysis of the face speedily disappeared; and, in this respect, the present case exhibited a remarkable contrast to that of M. G. a contrast, however, sufficiently explicable by the difference in the exciting causes.

Pneumonia, &c.—All the cases of idiopathic pneumonia were met with in children under ten years of age; the two fatal cases of measles, also, died of inflammation of the lungs. Of the five who died of scarlatina, three had pneumonia; and in the other two instances, both young children, the scarlet fever was accompanied with great inflammation and swelling of the parts of the neck near the angles of the lower jaw. In neither of these two cases did the swellings terminate in suppuration, but the children rapidly sunk into a state of coma, and their death was probably in part caused by the mechanical obstruction thus opposed to the easy return of the blood from the head, and by the impediment to free deglutition and respiration.

Synochus vel Typhus.—During the half year comprised in this report, the cases of synochus, in general, were not of a very severe character; this was especially observed where the disease attacked children, and from the following statement, it will be seen, that more than half the cases of fever occurred in children under ten years of age. The whole number of cases in the two quarters, was 142, of these, five died. In the first quarter there were, of all ages, thirty-three males, of which, two died, and thirty-six females; twenty-four of the males, and nineteen of the females, were under ten years of age, and of these forty-three

cases, none terminated fatally. In the second quarter, there were thirty-three males, of which, one died; and forty females, of which, two died: there were, under ten years of age, males 20—1 died; females, 17; above that age, males, 13; females, 23—2 died.

Variola.—In my former report for 1830, I noticed the circumstance of small-pox having become epidemic in Birmingham; and also that in December, when this epidemic appeared, of thirty cases, five terminated fatally. In January of the present year, the malignity of the disease increased, instead of diminishing; but subsequently it lost much of the severity of its original character, as will be seen from the following statement of its progress during the several months comprised in the semestre of this report.

	No. of Cases.	*Died.*
January,	27	8
February,	49	6
March,	28	0
April,	15	0
May,	12	1
June,	16	1
	147	16

Of these 147 cases, there were, under ten years of age, males, 63—9 died; females, 69—7 died. Above that age, males, 4; females 11, of which, none died.

Twenty-two cases of small-pox after vaccination, are noticed in the report, as having occurred during the six months; and, with one exception, these require but little observation. In some there was much fever, occasionally attended with slight delirium; but this state subsided soon after the eruption made its appearance. Twelve of the twenty-two cases were met with in children under ten years of age. The fatal case of small-pox after vaccination, was the following:—

Variola post vacciniam.—Jane Richards, aged two years and a half, was vaccinated rather more than two years since, and the cicatrices upon her arm, although scarcely depressed below the level of the skin, were apparently good. Eight months ago, she was ill with measles, and, from that time, she has been continually subject to attacks of pulmonary catarrh, with expectoration of blood, and wasting of flesh. Her elder sister, four years of age, became ill with confluent small-pox, intermixed with purpura, on the third of January, and died on the sixth. Jane, the subject of the present remarks, took the small-pox on the fourth; on the sixth, numerous petechiæ appeared on the body, and the disease was accompanied with increased bloody expectoration: she died on the seventh. The eruption of the small-pox, though general, was not severe; but the disease, acting upon a constitution much enfeebled by previous illness, was, from the commencement, accompanied with great prostration of strength, as was, indeed, indicated by occurrence of purpura.

Vermes Intestinales.—In one of the cases of intestinal worms, the presence of worms in the bowels was accompanied with somnambulism; the disposition to walk in the sleep, was, however, removed, by the expulsion of several yards in length of tape worm. The patient was a boy, thirteen years of age. In another instance which came under my notice about two years since, a remote irritation, but of a different kind from that in the former case, had probably some share in inducing the sleep walking. The individual was a young unmarried woman, who was pregnant, and had been removed from her parents' house about six weeks before her delivery. In the middle of the night, after her removal from home, she arose in her sleep, in part dressed herself, and walked home, a distance of nearly a quarter of a mile, and then the fruitless efforts which she made to open the door, awoke her. Her alarm at her situation, when she was awake, produced a state of high mental excitement, which continued for several days, but the somnambulism did not recur.

Under the term *Anomala*, are comprised several cases of contusion, burn, &c. One was a case of recovery, from taking, by mistake, some oxalic acid; and another was a case of sloughing of part of the septum, between the vagina and rectum, caused by difficult child-birth.

Newhall-street, Birmingham,
October 1, 1831.

Note by J. Darwall, M. D., on the Influenza at Birmingham.

The account of the influenza, given in the above report, nearly coincides with the experience of private practice. It was not recognized as an epidemic, till the middle of June, but insulated cases had occurred much earlier. I attended one severe case a few miles from Birmingham, so early as April, but which, of course, at that period, was not regarded as a peculiar form of disease.

The symptoms, though always bearing a certain resemblance, were, nevertheless, considerably varied. In some, gastrodynia was the severest affection; in others, the pain of the head; in others, inflammation of the mucous membrane of the air passages.

In a communication with which I have been favoured, by Mr. Chavasse, it is stated, that the lungs and brain were most affected.

Mr. Wickenden states, that the most prevailing symptoms were, "fulness of the schneiderian membrane, with much sneezing, but little subsequent increase of secretion; the inflammatory condition of the mucous membrane, could, in many cases, be traced, by the sensations of the patient to the fauces, trachea, and lungs, but causing a less sense of rawness and soreness of these parts, and accompanied with less cough and expectoration, than in ordinary cases of catarrh, pain in the forehead, dullness of thought, general lassitude, and aching of the limbs, quickened pulse, dryness of skin, without material increase of heat, loaded tongue, and considerable thirst."

Mr. Moore, of Halesowen, states that, "the mucous membrane of the respiratory organs was chiefly affected; occasionally, the mucous membrane of the alimentary canal." And a similar account is given by every other medical man from whom I have received any information. All, also, agree in the great debility with which it was accompanied and followed.

Some cases occurred, in which it might almost have been thought contagious; and Mr. Moore states that, in his opinion, it decidedly was so: on the other hand, this was by no means the general opinion.

The following is the most common form which it assumed in my own practice:—It commenced as a very severe catarrh, being ushered in by a severe discharge from the nose and eyes; shivering; head-ache; intense heat of skin; and considerable thirst. These symptoms were not always accompanied by cough, in the first instance, but this was generally added in the course of a few hours; sometimes, however, two days would pass before the cough appeared. There was also considerable dyspnœa, which was seldom relieved till copious expectoration had ensued. This usually continued for several days, most profusely, and consisted of very tenacious mucus. The cough was loud, noisy, and almost incessant. The bowels were not particularly affected in any way. The urine was muddy and high coloured; and in very many instances was passed, both in men and women, with scalding pain. In some females, leucorrhœa came on, disappearing, spontaneously, as the patient recovered. The tongue was seldom much furred; and was loaded for a very short time. The appetite, though impaired, seldom completely disappeared. The prostration of strength was very great, and there was great depression of spirits.

The duration of the disease was very various. Mr. Wickenden says: "In some persons it lasted only three or four days; in others, ten days or a fortnight; leaving the patient very feeble." Mr. Moore says: "The general duration of the disease was from nine days to a fortnight." Mr. Chavasse states, that "the duration of the cases, that fell under his care, seldom exceeded a week." The same variety is attested by other practitioners, from whom I have made inquiries.

The weakness that was left was remarked by every practitioner; and the necessity of recurring, at an early period, to tonics. The treatment appears to have been very nearly the same, by all practitioners, after the first week; and by none were depleting measures regarded as successful. The cough, which often remained after every other symptom, was, in my own practice, most successfully treated by quinine; or, if this could not be borne, by milder tonics, united with aromatic spirits of ammonia. A few cases terminated fatally; but all those reported were old people, or individuals who had previously suffered from pulmonary disease. In many, however, it excited the dormant symptoms of phthisis; and cases of this disease, dating from the attack of the influenza, are now of frequent occurrence.

ARTICLE IX.

Case of peculiar symptoms following the Bite of a Dog supposed to be rabid.

COMMUNICATED BY JOHN CONOLLY, M. D.

Late Professor of Medicine in the University of London,

In the month of August, 1825, a man, about 30 years of age, living as a farm servant with Mr. Page, of Billesley Hall, in Warwickshire, was bitten by a dog belonging to his master. The dog had been bitten by another dog, (of which, the owner, the history, and the end, were equally unknown,) and had subsequently become so mischievous, as to make it necessary to pen him up. The man had been used to the dog, and could not be persuaded to keep away from it. Whilst obstinately persisting to rub goose-grease on the throat of the animal, he received a bite on the back of the first phalanx of the middle finger of the left hand.

A few days after this accident, the dog died, after being in a state of fury and distress, snapping at all who approached him, and continually walking about the place where he was confined, hanging his tail, holding his mouth open, the tongue parched, the eye dim and sunk, and breathing with difficulty. It should be mentioned that, among the first symptoms observed in the dog, was a continued barking during the night, whilst sitting in one place, and without apparent object. The dog soon became very ill-tempered and sulky, snapping at any object held before him, the snap being succeeded by a short howl which was peculiar in its character, and what those in the neighbourhood who were most accustomed to dogs, considered to be constantly heard in cases of rabies.*

The dog was examined after death, but no one accustomed to dissection was present. The only appearance much remarked, was described as a large quantity of blood in the stomach. The windpipe was reported to be in a natural state.†

* In a very interesting demonstration of the effects of the poison of hydrophobia on the structure of the lower animals, at which, through the kindness of Mr. Youatt, I was fortunate enough to be present; it was, I remember, stated by that gentleman, that the howl of a dog affected with rabies, rises a third or a fifth at its close, and is considered pathognomonic of the malady.

† In Mr. Youatt's description of the *post mortem* appearances in the dog, it is stated that "the œsophagus is rarely affected; the stomach invariably. There is much vascularity and redness; in some cases confined to the rugæ, and not much exceeding the blush upon the healthy stomach during digestion, but more frequently descending between the rugæ, and occupying a considerable portion of the mucous coat." It is further stated that there is never any hæmorrhage into the stomach, although a fluid, resembling the deepest chocolate mixed with olive, or darker, like coffee, is often found.—*Youatt on Canine Madness.—London*, 1830.

The bite was received on Thursday, the 18th; the bitten part was cut out on Sunday, the 21st, by Mr. Webb, of Alcester. The man complained a little of illness, but not much until Sunday, the 28th. In the mean time, and before the excision of the part, the finger which had been bitten was stung by a wasp. On the morning of the 28th, he felt an unusual sensation whilst cleaning knives, the shining of which, produced a disagreeable feeling, and soon after he began to complain of his throat, and he could not swallow his breakfast: he had no aversion to swallowing, except on account of the pain the attempt to do so caused him. In the evening of that day, he was observed to be delirious: attempts to swallow, or to expectorate, brought on convulsive agitation, and he threw himself about so violently, that two or three people, uniting their strength, had some difficulty in holding him. Mr. Webb was now sent for, and found the patient in a state in which the attempt to swallow, or any attempt of another person to touch his throat, or to press his stomach or abdomen, produced something approaching to a convulsion.

On the morning of Monday, the 29th, the patient's agitation was nearly as great as on the preceding night, and Mr. Webb bled him to about 40 ounces: the blood was dark-coloured, did not flow freely, did not become buffed or cupped, or present any peculiar appearance. After the bleeding he slept a little occasionally, and his agitation became less. His bowels had been previously confined, and there had been retention of urine for twenty-four hours, but these symptoms were removed by the administration of an enema.

Mr. Rice, of Stratford, having obligingly communicated to me some of the particulars of this case, which began to be talked about as a case of hydrophobia, I accompanied him and Mr. Royston, now of Redditch, to Billesley Hall, on the evening of the 29th, and saw the patient at 7, p. m. We had not, on that occasion, the advantage of meeting Mr. Webb, who, however, had left a note, requesting me to adopt whatever additional means I might consider to be necessary.

The appearance of the patient, when we first saw him, was very striking. He was lying on a bed, and his legs were stretched out to their full length; his countenance was singularly anxious, and, as it were, contracted; his right arm was lying by his side, but his left was continually waved up and down over the lower part of the abdomen; it was quickly and uninterruptedly moved, and alternately directed outwards, as if for protection, and brought near the surface of the body without touching it. He was uttering low short moans, which kept time with the above described motion of his hand; but the moans were at intervals interrupted by a gasping or short sob. His respiration was hurried, and apparently performed wholly by the thorax: very frequently it became for a few minutes extremely rapid, and so precisely similar to the panting of a dog in hot weather, that no other words could properly be employed to convey an idea of it.

Now and then both the panting and the breathing seemed to cease; his respiration becoming inaudible for a minute or more, during which time he appeared unconscious of what was passing around him.

The pulse was 98, and free; the skin of natural warmth all over the body, at least as regarded the head and extremities, for, although he complained, by signs, of his throat, stomach, and abdomen, he would not permit us to place our hands on those parts, shrinking from our attempts to do so, as a man would shrink from the approach of burning coals, or a sword. He was but now and then able to speak a syllable, and only in a whisper; but he made frequent signs for something to moisten his mouth; and then, apparently with excessive pain and difficulty, and with much gulping and spasmodic action about the throat, swallowed a tea spoonful of bread sopped in milk and water. He not unfrequently appeared anxious to be instantly raised up, and then, with long and painful efforts, during which his whole body was distressingly agitated, he expectorated a small quantity of tenacious mucus.

During all this time his mind was, for the most part, free and undisturbed. He often intimated, by signs, that his throat and bowels were painful; and also his head; and seemed to think he should certainly die. He made no allusion to his hand, the wound of which had not yet healed; and we were informed that he did not imagine, and indeed would not believe, that the bite of the dog had any thing to do with his illness.

A light was brought suddenly into the room, without affecting him: the dashing of successive pails of water into a tub, in preparing a warm bath, seemed, on one or two occasions, to give him violent disturbance. Mr. Rice, who has a distinct recollection of this, which escaped my own observation, describes him as having manifestly shrunk with apprehension whilst this was doing; but at length he sat down in the bath, with a decrease of agitation. He remained twenty minutes in the warm water; during which time his sufferings were diminished, and the respiration was, generally speaking, more tranquil, although now and then the panting came on. On being taken out of the bath, he was laid in a warm blanket, and appeared to be greatly relieved, although still unable to speak or to swallow. He remained tranquil for some time afterwards. We took this opportunity of carefully examining the under-part of the tongue, but found no appearance of the vesicles described by foreign writers: the tongue was very gently raised by the small end of a tea-spoon, but the examination produced a convulsive action in the throat.

After this, ten leeches were applied to the throat, and twenty-five to the abdomen and thorax; and poultices of bread and milk, with the addition of laudanum, were applied to the leech-bites in both situations. Mr. Webb had previously ordered a pill, consisting of hydr. submur. gr. iij. opium, gr. i. and antimon. tartariz. gr. ss. to be given every four hours: it was

thought advisable to order it to be given every *two* hours during the night.

A blister was applied to the throat; and another, of the size of an ordinary pair of bellows, was applied to the whole front of the thorax, and the abdomen as far down as the umbilicus.

We left our patient with feelings of dejection, thinking it very probable that his disorder might increase in violence, and prove fatal, before we could see him again. We approached the house, the next morning, (the 30th) with anxiety, hardly expecting a favourable report. On this occasion we met Mr. Webb and Mr. Purton, of Alcester. The apparent results of what had been done were very agreeable to us. The leeches, we found, had produced immediate relief in the throat; and the relief was accompanied by the restoration of the powers of swallowing and speaking. The pain in the stomach and abdomen had also been relieved; and the patient, after being able to take a basin of broth, had slept very soundly.

On going into the patient's bed-room, we found him still in a profound sleep, breathing deeply and slowly: his skin was warm, and not very dry, and his pulse was 83. But, during his sleep, we observed, every three or four minutes, that his body was suddenly, and sometimes violently, shaken. His lower jaw was also frequently seen to be a little agitated. His night-nurse told us that, whilst he slept, he had sometimes almost sprung from one side of the bed to the other. The sound of many voices did not disturb him; and as we were all obliged to leave the house soon, we thought it right to rouse him a little. For a few seconds, after being awoke, he seemed unable to account for our presence; but he afterwards spoke very collectedly, and quite clearly and naturally. He said he had not dreamt during the night; he expressed himself greatly relieved, and complained only of a little pain in the bowels. His bowels had not been further moved: the abdomen was full and hard, but he no longer shrunk from pressure; and there was no urinary retention. His skin was of natural warmth, and his countenance less anxious: the cheeks were a little flushed; and the tongue was partially detaching a whitish scaly coating. He complained of thirst. No vesicles were observed under the tongue. Directions were given that the enema should be repeated, and the pill continued at intervals of four hours. Five pills had been taken since our visit the previous evening.

August 31.—The improvement continued. He slept better, but the agitation, during sleep, now and then occurred. The bowels had been moved by the enema. Abdomen still rather full and hard, and a little pain complained of. ℥vi of castor oil were given. The pills to be continued at intervals of six hours; and three table spoonfuls every four hours, of an emulsion of ol. amygdalæ, ℥vi.; pulv. acaciæ. ℥vi.; syrupi. papaver. ℥ss.; aquæ distil. oss, M.

Sept. 1.—Felt himself so well as to wish to get up; but on moving he was too weak to support himself. The castor oil had made him sick, and had acted on the bowels. The abdomen soft and natural. No pain: no convulsive agitations. Voice observed to be thick. He had only taken one pill since the 31st. Their repetition was directed.

Sept. 3, vespere.—Slight difficulty of swallowing felt to-day. No pain. He was low-spirited and weak. Pulse about 60, and feeble. Bowels regular. Hardly any appetite for food.

From this time he took little or no medicine. Some coffee was ordered, which greatly refreshed him: he afterwards slept well, and gradually got better in every respect. He was soon afterwards married to a young woman who had most carefully and kindly attended him in his illness, and left this part of the country.

Two years after the occurrence of this case, I wrote to Mr. Webb, to enquire whether or not he knew anything of the subsequent state of the patient; and a circumstance communicated in Mr. Webb's reply, is worthy to be added to the above detail.

"I do not know," says Mr. Webb, "if I informed you, that about six weeks after the man was bitten, and three weeks after the wound was healed, he came to me with a vesicle, situated partly where the wound was excised, similar in size and shape to a large cow-pock vesicle, and filled with a reddish fluid. I recommended him to apply a poultice to it, which caused it to break and disappear. I have certain information that the man is living and in health."

I have purposely detailed all the particulars of this case, without comment. I believe I was the only witness of it, who entertained much doubt concerning its being a decided case of hydrophobia; and I confess my doubts, concerning its nature, remain. The dissection of the dog was too imperfect to make the evidence complete; and the supervention of the symptoms, on the supposed cause, was more rapid that it is commonly supposed to be in cases of rabies. The patient was of an irritable constitution; and had been, at a former period of his life, *subject to fits.* But the symptoms were exceedingly curious, and quite unlike any of the ordinary symptoms of disease.

If it may be admitted that the dog actually died in a rabid state, we could hardly avoid considering the patient as really the subject of hydrophobia; and his recovery, under very simple treatment, even from what must be looked upon as a mild degree of so dreadful a disorder, would be a fact of some value. Two circumstances appear to be constant in rabies, whether existing in the dog or in the human subject: a violent degree of nervous disturbance,—and a disposition to local inflammations. The treatment, in the case just described, was dictated by a consideration of these circumstances; and, without laying undue stress upon this single case, it must be allowed to illustrate the advantage of acting on plain indications of treatment, in pre-

ference to relying on any supposed specifics. That a remedy may some day be found, in some of the kingdoms of nature, even for hydrophobia, is by no means improbable; but, until such a remedy has been found, the above indications are, perhaps, the only ones which can be acted upon with safety, or a hope of success, at least after surgical means of prevention have been ineffectually employed.

I should, perhaps, explain, that at the time of the occurrence of this case, medical men were led to believe in the existence of certain vesicles under the tongue, in cases of rabies; and of the advantage of puncturing them, giving the patient, at the same time, large doses of the decoction of broom, and causing it, also, to be used as a gargle. Although we did not lose our time in giving the decoction of broom, we had not yet learnt the non-existence of such vesicles in any case; a fact, I believe, now generally admitted. When their existence was confidently asserted, they were said to appear between the third and ninth day after the bite; and the life of the patient was said to depend on their puncture. The period, therefore, of their alleged appearance, was past before this patient's situation attracted any attention.

Mr. Youatt, to whose able papers, republished from the *Veterinarian*, I have already referred, is of opinion that an enlargement of the sublingual glands, with appearances of inflammation, may have been mistaken for the vesicles in question. I have the more pleasure in quoting from the very interesting writings of Mr. Youatt, on this subject, from having had personal opportunities of witnessing the truly philosophic zeal with which he endeavours to investigate it; and the liberality with which, in his anxiety to improve our knowledge of the nature and treatment of a fearful malady, he courts the co-operation, assistance, and suggestions of the medical profession.

Warwick, October 6th, 1831.

ARTICLE X.

Half-yearly Report of the Birmingham Eye Infirmary.

BY MR. MIDDLEMORE,

Assistant Surgeon to the Eye Infirmary.

Acute idiopathic conjunctivitis, 99. Chronic conjunctivitis, 47. Acute conjunctivitis, with pustules on the conjunctiva, 60; ditto, with ulcer or pustule of the cornea, 37; ditto, with purulent secretion, 51. Acute purulent conjunctivitis of infants, 24. Irritable conjunctivitis, 10. Strumous conjunctivitis, (acute and chronic,) 69. Fungous growths from the conjunctiva, 4. Strumous corneitis, 9. Vascularity of the cornea, 7. Opacity of the cornea, 27. Staphyloma of the cornea, 3. Rheumatic sclerotitis, 5. Staphyloma of the sclerotica, 2. Acute iritis, with or without ulcer or opacity of the cornea, or hypopion, 31.

Arthritic iritis, 3. Syphilitic iritis, 4. Strumous iritis, 7. Chronic iritis, 5. Fungus from the iris, 6. Cataract, 9. Dislocation of the lens, 7. Choroiditis, 3. Glaucoma, 5. Amaurosis of various kinds and degrees, 20. Pterygium, 4. Diseases of the lachrymal passages, 10. Strabismus, 3. Tinea, 49. Lippitudo, 8. Hordeolum, 4. Ectropion, 3. Entropion, 5. Inflammation of the palpebræ, 6. Tumours in the eye-lids, 5. Suppuration of the eye-ball, 2. Wounds of the eye-ball and its appendages, 25.

Partial formation of an Eye-lid, by the prolongation of the reflected portion of the conjunctiva.

Thomas Coxon, æt. 14, had a strumous abscess in the upper eye-lid, about two years ago, which was opened, and upon healing, produced the following aggravated form of ectropion. The integuments of the eye-lid are very much shortened, as though a portion of them had been destroyed, and a little above its tarsal margin, they are firmly adherent to the periosteum; the whole of the superior palpebral portion of the conjunctiva is everted, and the reflexion of that membrane, from the eye-ball to the upper lid, is distinctly seen. The everted portion of the conjunctiva is swollen, vascular, and granular; its granulations being, as the accompanying drawing will demonstrate,* extremely large, and its vascularity such as to present a soft florid red surface, resembling "the injected villous surface of the fœtal stomach." As a great part of the anterior aspect of the eye-ball would be necessarily in a great measure exposed to the influence of the atmosphere, and the constant irritation of particles of dust, &c. owing to the shortening and eversion of the upper lid, which covers so large a portion of the anterior surface of the globe, unless some provision against these occurrences, were either provided by art or nature, it is interesting to observe, in this instance, the changes wrought in the conjunctiva, for the purpose of providing against the inconvenience, and supplying the deficiency occasioned by the loss of so large a portion of the upper lid.

I have stated that, soon after the ectropion occurred, the conjunctiva might be distinctly seen at its point of reflexion from the eye-ball to the lid; by degrees, this reflected portion of the conjunctiva became relaxed, and gradually elongated, so as to form an imperfect lid, somewhat similar in appearance to the membrana nictitans, which, although insufficient to cover the whole of that portion of the eye-ball usually protected by the upper lid, materially diminishes the inconvenience, its shortening, and, as regards its effect on the eye-ball, its absence, originally produced.

Dislocation of the Crystalline Lens.

There have occurred several cases of dislocation of the lens, and in two instances only, did this accident produce any serious degree of pain or inflammation, and in those, perhaps, I ought,

* A beautiful drawing was sent to the Editors illustrative of this case.

in strict propriety, to have said, that pain and inflammation accompanied, rather than were produced by, the dislocation of the lens; for in one of them, the iris was lacerated, and the cornea divided, by the injury, which produced the displacement of the crystalline, and in the other, a hard, large lens, contained in its capsule, was propelled into the anterior chamber, by a severe blow upon the eye. However, I do not mean to say, that dislocation of the lens, cannot, per se, excite pain and irritation even in a healthy eye, and where the dislocation has taken place, unconnected with any severe local injury; but I am confident that it does not, under such circumstances, produce very frequently those severe effects which render its removal by an operation, necessary or imperative; much, even in these cases, will depend on the patient's general and local susceptibility, and on the size, firmness, and situation, of the displaced lens.

I mentioned, in my first report, that a person was sent to the infirmary, in whom the lens of one eye, passed most readily from one chamber of the eye into the other, according to the position of the body, without exciting any severe pain, or producing any imperfection of vision, except such as was dependant on the unequal and irregular re-fraction of light. A traveller, in passing through this town a short time ago, had a fall from his horse, and his lens became dislocated, in consequence of a severe blow upon the head which he then received, but it was soon absorbed without leading to any acute symptoms of any description; and so many cases of the same kind have fallen under my notice, that, speaking from my own experience, I am warranted in stating, that, in those cases where it becomes necessary to extract a dislocated lens, it is not merely because the lens is displaced, but, because the eye was previously in a diseased state, or the injury producing the displacement of the lens, had, at the same time, given rise to an acute condition of inflammation, which the presence of any foreign body would necessarily maintain and aggravate. It often happens, however, that the lens becomes displaced, owing to disease of its capsule, which disease may be either accompanied by, or unattended with, a previous inflammatory state of the eye, and in the latter case, of course, an eye so circumstanced, will be rendered still more irritable, its inflammation will be still further aggravated, by the intrusion of the foreign substance. Again, the injury which produces the displacement of the lens, frequently excites severe inflammation, which the presence of the lens may certainly aggravate. A blow upon the eye, or laceration of the tunics of that organ, is quite sufficient, in many instances, to excite inflammation, and if, in one case, the local injury displaces the lens, and in other instances does not produce any such displacement, how can we with propriety determine, that in the former instance, the displaced lens produces the inflammation, whilst in the latter, we observe that the same effect is produced by the injury alone. We are continually reminded not to confound the post hoc with the propter

hoc, and I apprehend that that very necessary distinction is not sufficiently attended to in the case before us. The cases in which foreign bodies remain, either in the membranes of the eye, or the cavity formed by them, and those in which the lens is displaced, either by disease or accident, without exciting any material degree of inflammation are so numerous, that without troubling your readers with a prolonged detail of cases, I will conclude my observations, by earnestly recommending, that neither the one nor the other, (for body or displaced lens) be removed, unless it be evidently found to originate acute inflammation, or greatly aggravate any ophthalmia, which may have previously existed, or have been excited from some other cause.

Operation for the Cure of Pterygium.

Among the cases of pterygium, the following appears to me to possess some points of interest:

Joseph Goddard, æt. 33, has completely lost the vision of the left eye, for many months, in consequence of the extension of a large sarcomatous pterygium over nearly the whole of the cornea. With regard to its appearances when it first appeared, and to its history, I can obtain no information, except that it was considered to be cancerous, and very gradually destroyed his sight.

Present appearance.—The cornea is nearly covered by a fleshy substance, of a triangular shape; which passes towards its lower part, nearly to its junction with the sclerotica, and terminates by an obtuse point; its substance being gradually diminished in thickness prior to its termination. On everting the upper lid, it is seen to be attached to the reflected portion of the conjunctiva; that portion or fold of it which intervenes between its transit from the globe to the under surface of the upper eye-lid; its attachment nearly extending the whole breadth of the reflected portion of the conjunctiva, becoming gradually narrower as it approaches the cornea; and, after passing upon that tunic, diminishing in breadth, until it terminates by an obtuse point nearly at its lower part. A probe can easily be passed behind that portion of it which is situated upon the sclerotica; and, with the exception of a narrow perpendicular line in its centre, to which it is attached to the parts beneath, and which appears to be nothing more than the reflection of the conjunctiva from its posterior surface to the sclerotica, it may be passed entirely beneath it. The substance of which it is composed, is a red fibrous mass, and so nearly resembles muscle, that it might almost be mistaken for a prolongation of the superior rectus. On each side of the pterygium, that portion of the cornea, which is visible, is rather vascular and opaque; and as the patient was completely blind of that eye, I did not expect that he would be benefited by an operation. At his request, however, I consented to perform one, having previously explained to him, that it was performed more in accordance with his wish

than from any reasonable prospect, on my part, of restoring his vision.

Operation.—Having the lids well separated, I passed a small probe-pointed knife beneath the pterygium, midway between its attachment to the reflected portion of the conjunctiva and the margin of the cornea, and attempted to divide it by cutting outwards; but so strong were the fibres of which it was composed, that I could have torn it from its attachment, or have stripped the conjunctiva from the sclerotica and the interior of the eyelid, rather than have divided it by such means. It was raised from the sclerotica, for nearly half an inch, by the cutting edge of the scalpel I employed for its division; and it was then that the reflection of the conjunctiva, from its posterior surface to the globe of the eye, was beautifully and distinctly exhibited. Having been disappointed in my first attempt, (and it was the first time I had experienced any difficulty in the performance of this operation) I introduced one blade of a probe-pointed pair of scissors, beneath one half of it, as far, at least, as it would pass; and having divided it, I accomplished the division of the opposite side in the same way, and eventually dissected away its central line, with a fine scalpel, as far as the cornea; and, in the same manner, removed it from its more intimate connexion with that tunic.

As I expected, the cornea was thoroughly disorganized; and the patient, consequently, derived no benefit from the removal of the pterygium.

A case, somewhat similar to the present, is related by Schmidt; and another is represented in Mr. Travers's "Synopsis of the Diseases of the Eye;" but the engraving, in the latter gentlemant's work, scarcely communicates an accurate idea of the strength, and fibrous character, of the pterygium upon which I operated. It is remarkable that Mr. Travers's patient recovered her sight, after so large a pterygium had been removed; for, in all cases, where I have noticed the existence of sarcomatous pterygia, which have extended over the whole of the cornea, and have existed for some length of time, that tunic has been so much changed in transparency, and its texture otherwise so altered, that no useful vision returned, after their complete removal by operation.

In the relation of this case, I have purposely abstained from entering upon the history of the formation of pterygium, tracing its progress, and minutely describing the effects, and the changes its continuance produces in the texture of the cornea; nor have I referred to the various forms of operation, advised by different authors, for its removal; my object being simply to recommend the early removal of pterygia, before they produce those morbid changes in the texture of the cornea, which were observed to have occurred in this instance: secondly—to advise their removal, in the manner in which the removal of this pterygium was eventually accomplished: and thirdly—to point out the true

seat of the deposition, or morbid growth, which constitutes the pterygial substance; the mode in which it receives a covering from the conjunctiva; and in which it becomes attached to the sclerotic coat of the eye.

The operation I performed, in this instance, and which is, in my opinion, the safest and most effectual operation for the removal of large sarcomatous pterygia, is contrary to those recommended by Scarpa, Beer, Lawrence, Travers, and Guthrie; none of whom, however, agree with each other in the details of the operation they respectively prefer and advocate.

Cases of Iritis, produced by a peculiar form of local injury.

During the harvest season, several persons applied at the infirmary, who had been struck upon the eye whilst reaping, by an ear of wheat, and who had not been able to continue their avocations, in consequence of the injury the blow (which they represented as having been most severe,) had produced. The condition of the eye was, in nearly every instance, the same, and the termination of all of them equally successful.

Local symptoms.—There was an attack of iritis, (which being marked by its usual symptoms, I need not describe,) and an abscess or purulent deposition within the deep-seated interlamellar texture; this abscess corresponded with the site of the injury, and was generally situated at, or towards, the centre of the cornea; after a time, the innermost lamina of the cornea gave way, the abscess burst, and its fluid contents became discharged, whilst a certain portion of the more solid tenacious matter, adhered to the surface of the cyst, until, being partly washed away by the aqueous humour, it might be seen, at first, as a distinct layer upon the surface of the hypopion, and afterwards, at the bottom of that effusion, and partly absorbed, it eventually disappeared, leaving behind, merely a deep-seated nebula of the cornea. The facility with which ulcers of the neural surface of the cornea heal, contrasted with those on its external aspect, where they are subjected to the friction of the lids, and to the influence of the atmosphere, was well exemplified in all these cases; the duration of the ulcer being, in nearly every one of them, exceedingly brief. Of course, the treatment was the same as that usually adopted for the cure of iritis, whether traumatic or idiopathic; that is, calomel and opium given to the production of ptyalism.

Effects of Iritis.

In mentioning the particulars of the following case, I am anxious to contrast it with one related in a former number of your Journal, in which a fungous growth from the ciliary ligament, was first repressed, and eventually removed, by the influence of mercury. The Editor of the Medico-Chirurgical Review, in a few remarks on this case, suggested that it might have been lymphatic deposition; but, independently of the absence of all

inflammation which could have produced such deposition, its form, its situation, the healthy state of the eye in general, and of the iris in particular, render such a supposition most improbable. There is nothing in the structure of the ciliary ligament, which can afford it an immunity from disease, although its situation renders it difficult to ascertain the morbid affections of which it may have been the seat, until they have extended to other textures.

I am further desirous of mentioning this case, because the situation of part of the lymphatic deposition, was somewhat unusual, and further, in order to recommend most strongly the persevering employment of hydrargyrus, for the purpose of promoting the absorption of recently, and therefore feebly, organized substances.

Case.—— Higgs, æt. 14, had an attack of iritis about four months ago, which, from his representation, was most inefficiently healed, and left behind great dimness of vision. The cornea is generally hazy and cloudy, the iris dull, changed in colour, immoveable and irregular; the anterior capsule is very partially covered by lymphatic deposition; on the under surface of the cornea, there were several distinct masses of lymph, one of which was so situated as nearly to obscure the pupil. There was no inflammation present, but vision was reduced to a mere capacity, to distinguish vivid light from total darkness. Wishing to attempt the removal of these masses of imperfectly organized lymph, as a necessary preliminary measure to the adoption of other treatment for the cure of the deep-seated mischief, I directed him to take calomel and opium to the production of slight ptyalism, and to maintain a slight action upon the gums for one or two weeks, but, in deference to the opinion of my respected colleague, I afterwards withdrew my prescription. Without wishing to impugn the judgment of any one, I may be permitted to state that, had the hydrargrus been employed in this instance, its use would probably have been attended with the happiest effects, and that in several more unpromising cases, its administration has been productive of great benefit.

Use of Strychnia in Amaurosis.

I have already stated my opinions respecting the use of strychnia in certain varieties of amaurosis, at some length, in former numbers of your Journal, but, as I have applied this remedy very frequently and successfully, I cannot forbear to state that my recent experience confirms the propriety of my original recommendation, and that I have no reason to suggest any alteration in, or addition to, my remarks on this subject, contained in your twelfth number, except that, with the precautions there specified, I apply it with the most perfect confidence, in a larger quantity than any I have yet ventured publicly to recommend.

Sulphate of Quinine in Strumous Iritis.

When I first drew the attention of the profession to the benefits resulting from the administration of the sulphate of quinine in

strumous iritis, I was not unaware, that many gentlemen would at once negative my views, without giving a trial to what might then seem such extraordinary practice. The beautiful illustrations of the capacity of mercury, to alter the action of the capillary system of the iris, had been so frequently presented to public notice, and had so strong prepossessed medical men in general, in favour of that mineral in iritic affections, that I knew nothing but the most unequivocal evidence of the utility of any new remedy, in such affections, would lead to any decisive change either in their convictions or their practice; and, on this account, I was content merely to introduce it to their notice, until prepared by my own experience, and that of others, to advocate its claims to their attention in a more decisive manner.

When inflammation of the iris is fully established, certain changes occur in its colour, which have been very properly referred to the action of its minute vessels; for, such changes occur primarily, and chiefly where those vessels are most abundant, that is, first at its pupillary, and afterwards, at its ciliary, margin; and if the inflammation be unarrested, the whole of that membrane becomes similarly affected. At this stage of the affection, nothing we can employ, short of the free administration of mercury, will restore the iris to its natural colour; we may, in some cases, stop the inflammation by depletion, but unless we at the same time change the action of those minute vessels, which are producing, or have produced, the discolouration in question, that discolouration will remain. Mr. Lawrence does not attribute any such effect to mercury, when administered under these circumstances; he says that the mercurial influence arrests the inflammation, and that the natural efforts of the part, remove the deposition. But, if mercury had no power beyond that of arresting the inflammation, we are naturally led to enquire, why does the iris remain permanently discoloured after an attack of iritis, where no mercury, or mercury administered to an inadequate extent, has been employed, whilst such discolouration rarely happens where the hydrargrus has been freely given, even though the inflammation may have proceeded so far as to have changed the colour of the iris, before it has been administered? The administration of mercury in iritis is useful, not more by arresting the inflammation, and changing that action of the minute vessels on which the deposition of lymph depends, than in promoting the absorption of morbid deposition, whether in distinct masses, in visible layers, or in that more general form in which it becomes so blended with the iritic substance, and changes the colour of its entire texture. Now this change in the colour of the iris, is only produced by long-continued or severe inflammation; it does not accompany the mild forms of the disease when speedily subdued, nor is it one of its early developed symptoms.

Iritis may be cured before it has proceeded to the developement of any, of what are usually termed, its effects, and very often by antiphlogistic remedies alone;* and one of its worst

* Dr. J. Thomson,, in the Edin. Med. and Surg. Journal. vol. xiv.

forms, one in which the tendency to lymphatic deposition is most strongly evinced, may be brought to a favourable termination, by means of the spiritus terebinthinæ.* Thus far, then, mercury is not indispensibly requisite for the perfect cure of iritis, but strumous iritis differs widely from either its idiopathic or its syphilitic forms; its symptoms are milder, its progress slower, and one of its more important effects, that is, lymphatic deposition, occurs less frequently, less extensively, and then only after the disease has been permitted to remain for a long period; so that, that condition rendering the administration of mercury so particularly necessary, that stage to which it is so peculiarly well adapted, in other forms of the iritis, occurs in this variety only after it has existed for some time. Independently, then, of the feeble and emaciated state of the subjects of iritis in general, the actual condition and tendency of these diseases, (idiopathic and strumous iritis) although the same in nature, differ so much in degree, that the adoption of the same treatment for both, would be equally unnecessary and mischievous. However, this does not apply to all cases, for some strumous children have apparently great constitutional strength, and in them the activity of the symptoms taken in connexion with their vigour of system, would render the employment of active measures, just as necessary as though the indications of struma were wanting. It may be said that the use of stimulants and tonics may readily cure an inflammation of a superficial texture, such as the conjunctiva, but in what way can it effect those changes in the minute vessels of a deep-seated part which are essential to the subduction of that inflammation, which the action of these minute vessels in a great measure constitutes? We know too little of the direct action of mercury upon the capillary vessels, to deny, that the sulphate of quina may not influence them through the medium of the system, just as effectually as the administration of mercury; I am now referring to that stage, which, in strumous iritis, continues so long, and is always anterior to the discoloration of the iris. Whether the administration of mercury, (to use the indefinite language usually applied to this subject,) stimulates or modifies the action of the capillaries, or whether it acts upon them secondarily, by first influencing, and increasing the activity of the absorbents, remains to be decided.

ARTICLE XI.

WORCESTER INFIRMARY.

Case 1.—Fracture of a Cervical Vertebra.

Sept. 21, 1831.—A. M. fell out of a pear-tree, from the breaking of a bough. He was brought to the hospital about half-past 2, p. m. Entire paralysis of the lower extremities;

* Observations on the Efficacy of Turpentine, in the Venereal, and other deep-seated Inflammations of the Eye, by Hugh Carmichael, Dublin, 1829.

slight feeling over the thorax and upper extremities; none over the abdomen; prapism; sudden and violent expirations, performed by the abdominal muscles entirely; vacant look; rather comatose; pulse quick. Urine was drawn off by a catheter.

22nd.—He was cupped over the situation of the fracture, and bled; and took cathartic medicines.

26th.—He died about 6, p. m., the symptoms having continued the same during the whole of the time after the accident.

Sectio cadaveris.—On examining the spine, the spinous process of the 4th cervical vertebra, was detached, by a fracture on each side of it. The body of the vertebra was fractured through perpendicularly, and very much comminuted also.

Case II.—Poisoning by Oxalic Acid.

October 19, 1831.—Wm. Kench, æt. 18, was brought in at a quarter-past 7 in the morning, said to have taken ℥ss of oxalic acid given him by a druggist, by mistake for Epsom salts; he took it at a quarter-past 6; felt great pain in the stomach, and began to vomit about ten minutes after. Incessant vomiting; griping pain in the stomach, with burning sensation. He was given, immediately, a mixture of chalk constantly for some time, and castor oil some little time after.

10, a. m.—Pulse small; surface of body cold; complains of cramp in the bowels; bowels have been much moved; stools very white, and mixed with chalk. Small quantities of brandy and water, with laudanum, were administered every five minutes.

From about 12 o'clock, he mended fast: having been very soon revived by the brandy, &c. was discharged on the morrow, quite well.

ARTICLE XII.

Parochial Returns of Births, Marriages, and Burials, that have been registered in the several parishes of the City and Suburbs of Worcester, including those of the several congregations who dissent from the Established Church, between the 1st of April and the 1st of July, 1831.

Births, 221; Marriages, 94; Burials, 199.

Between the 1st of July and the 1st of October, 1831.

Births, 190; Marriages, 78; Burials, 142.

NOTICES AND ACKNOWLEDGEMENTS.

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THE MIDLAND

Medical & Surgical Reporter,

AND

TOPOGRAPHICAL AND STATISTICAL JOURNAL.

HOMO, NATURÆ MINISTER ET INTERPRES, TANTUM FACIT ET INTELLIGIT, QUANTUM, DE NATURÆ ORDINE, RE VEL MENTE OBSERVAVERIT; NEC AMPLIUS SCIT, AUT POTEST.—BACON, NOVUM ORGANUM.

No. XV. FEBRUARY, 1832.

CRITICAL REMARKS on SCROFULA.

BY J. MALDEN, M. D.

IT has been remarked that the progress of sciences, strictly analytical, is indicated by the terms employed in them becoming more precise in their meaning, and more definite in their application, than they could possibly be, when the field of observation was too small for the comparison of analogous phenomena, and, consequently, for the establishment of those distinctions upon which the use and meaning of words depend.

If, therefore, in any department of natural knowledge, we find words vaguely and indefinitely employed, or, if we find writers who are most conversant with the subject, differing materially from each other, in the meaning they attach to the same names, we may infer that the subject is still invested with obscurity, either from the paucity of facts observed, or from the want of an accurate discrimination of them; in consequence of which, analogous phenomena are confounded as identical, and the most material points of difference pass unnoticed.

Few subjects are calculated to suggest these observations more forcibly than the History of Struma or Scrofula, as it is found in the writings of medical men.

The Greek and Roman writers employed the terms χοιραδες, scrofulæ, strumæ,* to express tumours indolent, and colourless

* Strumæ quas χοιραδας vocant, glandulæ sunt scirrho induratæ quibus collum axillæ et inguina potissimum tentantur."—*Actuarius.*

"Strumas appellant Græci χοιραδας, a porcis, in quorum gutture adeposi quidam reperiuntur strumis similes, &c. &c. &c."—*Ætius.*

in their early stages, slow in their growth, and occupying principally the neck, axillæ, or groins, sometimes other parts, as the breasts of women.* They considered them as local diseases, and treated them chiefly by topical applications, with the design either of dispersing them, or inducing suppuration in them. Some recommended their early extirpation by the knife, and gave the most particular directions to avoid wounding large blood-vessels, or the recurrent nerve, where the tumours were deeply seated.† Their treatment of them when they ulcerated, was, for the most part, conducted by very stimulating, or even caustic applications. They distinguished strumæ from other tumours, as the steatoma, atheroma, and meliceris, and they described two sorts, the mild, and the malignant.‡

Wiseman, in his elaborate treatise "of the King's Evil," after quoting the definitions of Galen, Paulus, Ægineta, and Aetius, makes the following remarks. "But none of these definitions do seem to me sufficiently to express the disease which we in England do call the King's Evil;" "yet I do confess," he afterwards says, "that the specific difference whereby this tumour is distinguished from divers others, *is so hard to find out*, that it will be difficult to put a new definition in the room of those I now reject."§

How well aware he must have been of the difficulty of this undertaking, appears from this, that he instantly evades it, and substitutes in place of a definition, a most gratuitous hypothesis; one, however, that affords him ample space for introducing, under the title of King's Evil, a great variety of dissimilar affections. "I shall endeavour," he continues, "to fix upon a peculiar acidity in the serum sanguinis for my specific difference; and shall describe the King's Evil to be, a tumour arising from a peculiar acidity of the serum of the blood, which, whensoever it lights upon glandule, muscle, or membrane, it coagulates and hardens; when it mixeth with marrow, always dissolves it, and rotteth the bone."‖ This theory he supports by some loose analogies taken from the effects that aquafortis and vinegar produce upon different bodies.

He considers, what he calls his "specific difference," as the immediate cause of the King's Evil; and the remote causes of this acidity of the serum, he classes under the heads of air, diet, exercise, natural complexion, &c.

We cannot be surprised, after the admission of this fanciful theory, at finding, in a subsequent chapter, an enumeration as

* "Nascuntur maxime in cervice; sed etiam in alis et inguinibus, et in lateribus. In mammis quoque fæminarum se reperisse, Meges Auctor est."—*Celsus.*

† Vide Aetium in Serm. 3, cap. 5, de Strumis; et Paulum Æginetam De re medicâ, Lib. vi. cap. 35, de Strumis.

‡ "Aliquæ mansuetæ, aliquæ malignæ comperiuntur, &c."—*Aetius*

§ Wiseman, book iv. chap. 2.

‖ Wiseman, ibidem.

scrofulous, of almost every morbid growth and every ulceration, that can visit flesh or bone. Nevertheless, Wiseman, (who, for the time in which he wrote, (1676) was an extraordinary man,) did a great service to science and to his fellow creatures, by regarding struma as depending upon a peculiar state of the whole constitution, (whatever that state might be,) and establishing, in many instances, his practice upon this supposition.

"In order to the cure,"* he says, "three intentions are required. The first consists in the regiment of diet and other non-naturals; the second in pharmacy, or internal prescriptions; the third in the application of externals, either to discuss, suppurate, or extirpate, the glands." We still find writers upon this subject treading in his steps, and employing little more discrimination than he did, in the application of the term scrofulous, to diseases.

Cullen thus defines cachexiæ, of which he makes a class in his Synopsis Nosologiæ. "Totius vel magnæ partis corporis habitus depravatus; sine pyrexia primaria vel neurosi.' Of this class he has three orders,—*Marcores*, or wasting of the whole body; *Intumescentiæ*, or external swelling of the whole, or of great part of the body; and *Impetigines*. This last he thus defines; "Cachexiæ, cutem et externum corpus præcipue deformantes." The first genus of this order is *Scrofula*, and the definition of it is as follows; "Glandularum conglobatarum, præsertim in collo, tumores; labium superius et columna nasi tumida; facies florida, cutis lævis; tumidum abdomen." He then enumerates four species. 1. S. vulgaris, which is the struma of the ancients. 2. S. mesenterica, which is the *tabes mesenterica* of many writers, and is clearly the same disease as his own *tabes scrofulosa* in the order marcores; in the specific character of which, he has included *pallor faciei*, although he had just before made *facies florida* an essential character of the genus. 3. S. Fugax. This is either symptomatic of ulcerations of the scalp, or behind the ears, &c. or it is a casual and rapid enlargement of the cervical glands from cold, and is not peculiar to the constitutions characterised in the generic definition. 4. S. Americana is one of the symptoms of the yaws, and cannot, with propriety, be classed here as a distinct species.

Cullen's generic character should have been so given, as at least to include all his species, without which, a genus, as Mr. Mason Good has remarked, can no more exist than a regiment without soldiers. All his species relate only to tumours of the glands, visible or invisible, for in his scrofula mesenterica, an enlargement of the mesenteric glands is understood.

In his first Lines of the practice of Physic, (vol. iv. p. 359,) he says, "the character of this disease I have attempted in my Nosology; but it will be more properly taken from the whole of its history now to be delivered." He then gives an admirable

* Book iv. chap. 4.

description of the rise, progress, and appearances of the disease of the external glands, commonly considered scrofulous ; and so far, certainly, a just description of the first species in his Nosology. But afterwards we find, by the following passages,* that he attaches to the term scrofula a much more comprehensive meaning. "The disease frequently affects, and even at first appears in, other parts of the body. In particular, it affects the joints of the elbows and ankles, and those of the fingers and toes. The appearances about the joints are not commonly, as elsewhere, small moveable swellings ; but a tumour, almost uniformly surrounding the joint, and interrupting its motion." Again, he says, † "the eyes are often particularly affected. The edges of the eye-lids are affected with tumour and superficial ulcerations ; and these commonly excite obstinate inflammation in the adnata, which frequently produces an opacity of the cornea." Speaking of the tumours of the joints, he remarks that "in the abscesses following them, the ligaments and cartilages are eroded, and the adjoining bones are affected with a caries of a peculiar kind."‡ He considers "that the disease depends *upon a peculiar state of the lymphatic system*," of the nature of which he confesses himself entirely ignorant.

It is impossible, even upon a cursory view of what this great man has written upon the subject of scrofula, not to perceive how embarrassed he was with the difficulty which surrounded it, and how conscious he must have been of the want of further information.

Mr. Thomas White, surgeon to the London Dispensary, published a Treatise upon Struma, in 1784, in which, he contends that the disease is peculiar to the lymphatic system, and though he is obliged to acknowledge its existence in parts where lymphatics have not been demonstrated, and to describe the disease making great havoc in other parts than in lymphatic glands, still he never forsakes his hypothesis, but maintains it to the end of his dissertation. Thus, pulmonary consumption is considered as a disease of the lymphatics of the lungs and bronchia—(p. 37.)

It is admitted that it attacks the testes, without any proof being adduced of its originating in the lymphatic system of these glands—(p. 43.)

Disease of the hip joint and psoas abscess, are enumerated as scrofulous affections— (p. 44,) and the disease of the knee-joint, called white-swelling, is expressly stated to depend upon an enlargement of the lymphatic glands about the joint, and, in conformity with his theory, considered scrofulous.§ Certain diseases of the bone and periosteum, are conjectured to arise "from a ruptured or diseased lymphatic depositing its contents between the periosteum and bone."—(pp. 49, 50.)

* V. iv. p. 365. ‡ Vol. iv. p. 370. † Vol iv. p. 370.

§ "The lymphatic glands surrounding the joint are frequently affected, and give the true white swelling."—p. 48.

Dr. Robert Hamilton, of Lynn Regis, published his observations upon scrofulous affections in 1791. He, likewise, considers scrofula as confined solely to the absorbent system, but he says,* as the distribution of lymphatic vessels through the body "is universal, and almost infinite, the site of scrofulous affections in these vessels and glands must be unbounded." He thus reconciles with his theory, that ubiquity of scrofulous disease, which his practical observations seem to compel him to acknowledge. "It is to be met with," he continues, not only near the surface of the body, but deeply seated in the interstices of the muscles; in the cells of the tela cellulosa; in the different cavities of the body, and the several viscera in these cavities; in the bursæ mucosæ, the capsulæ of the joints; even in the internal structure of the bones themselves; and, in short, every where, where absorption of lymph is carried on for the several purposes of the animal economy, and of chyle for the nutriment of the body."† What the nature of the primary affection of the absorbent system may be, that leads to all this mischief, he does not attempt to shew, but he quotes, with apparent approbation, the opinion of Barbette. "Causa. Glandularum totius corporis munus (quod certissimum esse puto) est lympham transcolare; necesse ergo est lympham crassiorem hujus affectus esse causam, unde illarum primó durities postea sensim accrescens pertinaxque tumor." This is an opinion unsupported by any direct proof.

It did not occur to Dr. Hamilton, that by a train of reasoning similar to that which he has adopted, it would not be difficult to prove that scrofula was a peculiar affection of the venous, arterial, or nervous system. For the whole of his argument is analogous to the following. There is no tissue or organ in the human body where there are not veins; there is no tissue or organ in which scrofulous disease is not occasionally found, therefore, scrofula "is confined solely to the" venous "system." The very indefinite notion he seems to have formed of the nature of this disease, is in nothing more apparent than in this; that (p. 64 to 66,) he concludes even scirrhus and cancer to be consequences of scrofula. His work contains some valuable cases, but the arrangement is bad, and the connecting pathological reasoning for the most part erroneous. On the whole, he cannot be said to have advanced our knowledge of the nature and treatment of scrofulous affections.

The venerable and accurate Heberden, in his Commentaries, chap. 87, on the subject of Struma, says, "that habit of body is called strumous, or scrofulous, or the evil, in which the lymphatic glands are swelled with little or no pain. This happens most commonly, in the neck and arm-pits, more rarely, in the groin. Those of the mesentery are found liable to the same disorder, and probably all the other internal lymphatic glands." He then notices the occasional thickening, in these subjects, of

* p. 8. † pp. 8 and 9.

the end of the nose, and of the lips; and, also, the inflamed and ulcerated eye-lids, cutaneous eruptions, and purulent discharges from the ears, and inflammations and enlargement of the tonsils, both acute and chronic.

Its close alliance with phthisis pulmonalis, did not escape the observation of this philosophical physician. "After the age of puberty," he remarks, "the tumors of the glands, and the inflammation of the eye-lids, usually begin to abate, and in adults often disappear entirely; but in some persons, upon their retreat from the outward parts of the body, they seem to fall upon the lungs, whence arise incurable consumptions:" and, again, when he is treating of Phthisis Pulmonum, chap. 72, he says, "The persons most subject to pulmonary phthisis, are those who are born of consumptive parents, and those in whom, during their infancy, or childhood, the mesenteric glands, or the lymphatic glands of the neck and jaw were swelled, and scirrhous, and especially if they have suppurated."

"Besides these swelled glands," he says,* "which make one species of the evil, there is another which is called the joint evil, which has begun in the hands, or elbows, or feet, with a small tumour situated so deep, that the bones are often affected. These have continued two or three years, before they have come to ulcers, which have been of such a malignant nature, as at length to make the hands and feet almost useless, or to make the fingers and toes fall off." He then asks "if the diseases of the head of the thigh bone, and also what is called the white swelling of the knee, are to be referred to this class; and remarks that "this seems *not unlikely*, as they have been found joined in the same person with the usual marks of inveterate scrofula."†

From the opinions of the writers above quoted, it will appear that the notions attached to the terms struma and scrofula, strumous and scrofulous diseases, have been, for the most part, vague and indefinite; that amongst the moderns there has prevailed a strong disposition to consider struma as a peculiar affection of the lymphatic glands, or of the absorbent system in general, and that the maintenance of this opinion has been the cause of much obscurity, doubt, and contradiction, whenever its illustration has been attempted, by reference to actual phenomena.

It has long appeared to me, that the nature of scrofulous disease can alone be ascertained, by the strenuous prosecution of the morbid anatomy of parts that have undergone the changes commonly deemed scrofulous. Having, by these means, traced the progress of this peculiar degeneration in one tissue, or organ, we may compare it with the progress of similar degenerations occurring in other parts. and these again with others, till at last we shall arrive at something like pathological accuracy, in our knowledge of what constitutes the permanent character of scrofulous action, wherever it may chance to be met with.

* Chap. 87. † Ch. 87.

For instance, is tubercular phthisis a scrofulous degeneration of the lungs? or, more strictly, is there a form of tubercular phthisis that is decidedly a scrofulous disease? Then, what are its characters, what the nature, origin, and progress, of the changes which the lungs undergo in this form of disease? Let this be ascertained by morbid anatomy, and then we may proceed a step further in our inquiry. Certain chronic enlargements of lymphatic and mesenteric glands, have been, on all hands, considered scrofulous; and, as has been seen, constituted, solely, what the ancients meant by struma; now it is our duty to trace as minutely the progress of the changes occurring in the glands, as we had before investigated those taking place in the lungs; and having so done, to compare them together, and to see what it is that they possess in common; other parts and viscera may now be visited with the same scrutiny, and, although it may not follow that we shall always be enabled to decide by the symptoms, during life, particularly in some organs, that the changes which are occurring, are of the nature called scrofulous; still, our diagnosis will, on the whole, be rendered less liable to inaccuracy, and the pathology of scrofula, as far as relates to its remote and exciting causes, its nature, and its treatment, must be improved by this mode of prosecuting the subject.

For though the investigation of diseased structure does not necessarily lead to the knowledge of the morbid actions which have produced it, still such inquiries, judiciously conducted, afford the most likely means of acquiring this knowledge. The difficulty of the subject is increased, by the minuteness and concealment of the parts in which the actions are taking place: but still, an accurate notation of the progress of the morbid changes, is best calculated to illumine the subject, the obscurity of which we should only acknowledge, in order to stimulate us to increased industry in our endeavours to throw light upon it.

When the progress of occult changes is thus rendered visible to the "mind's eye," the symptoms attending them will, in all probability, be more attentively observed, and the accuracy of our diagnosis in scrofula, as in other diseases, be improved by establishing the actual connexion subsisting between the signs and the things signified; the symptoms, and the morbid actions and lesions: and this, perhaps, is the most likely method by which we may arrive at any improvement in the treatment of this formidable disease.

The above remarks upon medical authors, who had written on the subject of scrofula, were committed to paper a few years ago, before the publication of the treatises of Carmichael and Lloyd. Of both these writers I need only observe, that they have investigated this subject in the true spirit of philosophical inquiry, and that their conclusions, as far as they go, are fairly deduced from their facts.

Carmichael's work is of value, chiefly for its describing with accuracy what may be called the "*cachexia strumosa*," and

tracing it satisfactorily to primary derangement of the gastric functions. He is one of the few disciples of Abernethy, who, thoroughly understanding their master's views, prosecuted their studies without any fanciful misapplication of his doctrines.

In Lloyd's work, the elucidation of those cases which fall more immediately under the care of the surgeon, is mainly contemplated. It is a composition of great merit, and obtained the prize of the College of Surgeons, in London. In no treatise extant, is the rise and progress of scrofulous disease, when it attacks the heads of bones and articular surfaces, so ably delineated.

ARTICLE II.

History of the College of Physicians.

No. 2.

The celebrated reign of Elizabeth, was followed by that of the Scottish James, and the transition from vigour to imbecility, from strict economy to wild wastefulness, from stern rule to garrulous and empty boasting, was sudden and complete. Under Elizabeth, the English nation had quietly pursued the paths of industry; and, undisturbed by political convulsions, undistracted by political theorists, it had acquired the highest point of prosperity which had ever been attained. But the acquisition of wealth had awakened the spirit of independence, in too many instances, connected with notions of liberty the most extravagant and the most impracticable; nor was there a single class of the state, which did not more or less participate, in what, in the present day, has been so well termed, the onward movement of revolution. The college of physicians were now, therefore, destined to contend with new feelings and new principles; it was no longer by the dull precedent of law that they were to be judged, but by the actual usefulness of their measures, and these were hardly such as to attract favour or affection. They saw and felt strongly the evil which arose from the increase of incompetent persons in the profession; but they sought for more extensive powers, which always proved inefficient, instead of increasing the means of education, and thus multiplying the number of regular men. In so wealthy a country as England, it cannot be expected that quackery will not, to a certain extent, succeed, but, whenever the contest fairly takes place between real knowledge and the mere semblance of it, the latter will always be found ultimately to fail. Whatever opinion, however, we may hold of the policy of the college, there can be no doubt that from the time of James the first, its decline of power is to be dated. Year after year saw fresh attacks made upon its privilege, till at length it has become a mere honorary distinction, but, excepting in the

metropolis, affording no support to its members, and no where affording any protection to the public.

The college of physicians was originally founded, like all other corporations, for the advantage of its own members, that advantage being, as it was truly supposed, connected with the interest of the community. In the process of time, however, this, as all other corporations, found these two interests apparently separated, and, unfortunately, the selfish principle predominated. Yet, perhaps, it is too much to say, that this was actually done upon an exclusively selfish feeling, since we are always too easily inclined to confound the interest of the small body to which we happen to belong, with the interests of the public generally. Hence it may easily be granted, that while the college pursued a system calculated merely to preserve its own exclusive privileges, they really deemed that they were consulting the universal benefit.

The attack appears to have been commenced by the surgeons, who petitioned for the liberty of prescribing inward, as well as outward medicines, in wounds, ulcers, and syphilis, and, although it failed at the time, the petition was too reasonable to be entirely without influence. This petition has in it a singular clause, for, after requesting the house to take into consideration "the unlawful privilege and hurtful power given to them to set fines, to take recognizances, inflict imprisonments," etc. it states that, having preferred their "petition to his majesty touching the premises, his majesty was thereby graciously pleased to leave the petitioners free to seek any lawful remedy for their grievances, either in parliament or otherwise." Now, in this very permission, we have proof that the highest dignities of the realm were beyond the influence of the college, and that James recognized something reasonable in the prayer of the petition. Had he not done so, we may be assured that he would have prohibited any farther proceedings, and, perhaps, have delivered a royal oration, to prove that the surgeons were not suffering under any actual grievance. The petition, however, was rejected by the Parliament, and the surgeons became frightened at the hostility they had provoked. The language of Dr. Goodall, on this occasion, is highly amusing, while it exhibits the surgeon as still the mere handicraftsman and servant of the physician. With a degree of meanness which their station can alone explain, they protested that they had no intention of infringing upon the privileges of the college, and threw the blame of their petition, which "they confest was very unjust and unreasonable," upon their council, "who designing to express great cunning and subtilty of it, perverted the true sense intended by them." The end of this affair, very plainly, however, proves, that neither party were yet prepared to set the other at defiance, for the president desired the surgeons to offer what they desired in writing, to the college, and "if thought just and reasonable, they might expect the college's encouragement and assistance."

Whether anything was done upon this, does not, however, appear, but it is manifest that the physicians still wished to preserve a good understanding with the surgeons.

Scarcely had the college overcome the surgeons, than they were again involved in a contest with a graduate of the University of Cambridge. Of Dr. Bonham we know nothing more, than his contest with the college, but it had the effect of curtailing their privileges in a most important particular. It does not appear that originally this individual intended to defy the college, but having failed in his examination before the president and censors on two different occasions, he at length determined to try their right over the graduates of the Universities. With this intention, therefore, he declared "that he had and would practice in despite of the college," claiming exemption from its authority as a graduate of Cambridge. The president and censors sitting as judges in their own cause, naturally determined against him, and committed him to prison, but he was released in the same month by the Judges of the King's Bench, before whom his cause was heard. On this occasion, the Lord Chief Justice Coke delivered his opinion, and avoiding the question of exemption on the ground of an university degree, decided that imprisonment could only be inflicted by the college for mala praxis; that the penalty for practising only, was five pounds per month, and that "any one practising well in London, (although he hath not taken any degree in any of the universities,) shall forfeit nothing, if not that he practice it by the space of a month." The college could only recover the fine by an action at law.

Here, then, was a practice curbed which the college had hitherto used with great freedom, that of imprisonment for practising without the college licence, and henceforth this punishment was to be confined to cases of mala praxis. The historian of the college informs us, indeed, that "upon new practice proved against him, he was again committed." and would leave us to infer that his society had been victorious. Fortunately, however, he has given us, in another place, the "College questions resolved by the Lord Chancellor and Judges, in the fifth year of King James, A. D. 1607." As these questions enable us to ascertain the extent of the college's authority at this period, we shall give them at length.

Q. 1.—Whether graduates of Oxford and Cambridge may practise in London, or seven miles compass of the same, without licence under the college seal, by virtue of the clause in the end of the statute of 14, H. VIII. and whether that clause hath not relation to the statute of 3, H. VIII. only, or how far it doth extend?

Resp.—All resolved, that no graduate that is not admitted and licensed by the president and College of Physicians, under their common seal, could practise in London, or within seven miles compass of the same.

Q. 2.—Whether by graduates, graduates in physick only be understood?

Resp.—They resolved that the exception of 14, H. VIII. of graduates in the two universities, is to be understood only of graduates of physick and of no others. And all resolved that, by that exception, those graduates may practise in all places of England out of London, and seven miles of the same, without examination, but not in London, nor within the said circuit of seven miles.

Q. 3.—If graduates, not admitted to practise in London, practice there, whether for evil practice or misdemeanour therein, they be not subject to the correction and government of the college ?

Resp.—They all agreed, that they are subject to the government and correction of the college, by an express clause of the said charter enacted, which giveth to the president and college, supervisionem, scrutinium, correctionem, etc. as well of all persons using the practice of medicine within the city, etc.

Q. 4.—If they may not practise without the college, as their letters patent plainly import; then, whether such graduates are not subject to the examination, without which there were never any admitted, and without which the admission cannot be approved, because every graduate is not absolutely good ipso facto.

Resp.—It was resolved by all, that all that practised, or should practise, physic, either in London, or within the compass of seven miles of the same, must submit themselves to the examination of the president and college, if they be required by their authority, notwithstanding any license, allowance or privilege, given them in Oxford or Cambridge, either by their degree or otherwise."

From these questions and answers, it is quite manifest that the power of the college to examine graduates of the universities, was and is unquestionable, and, considering the slender opportunities for stictly medical information, which Oxford and Cambridge afford, we cannot but think the college right in contending for, and acting upon, this authority.

The other questions regarded the punishment of offenders, and upon this the answers confirmed the judgment of Sir Edward Coke, viz. "That by the charters and act of parliament, they might commit offenders, and practicers that offended, in non bene exequendo faciendo et utendo facultate," and that the college had the power of making an ordinance, by which practitioners of physic in London, wilfully refusing to be examined in non bene exequendo, etc. might be committed to prison, there to remain until he be delivered by the president and censors, and to forfeit and pay to the said college some reasonable sum of money. Whether such an ordinance, however, was made, we cannot discover. It is quite clear that these questions have some connection with Dr. Bonham's case, and we learn very certainly from the necessity of putting them, that there was an increasing disposition to question the authority of the college, and to destroy its monopoly.

Nor were the surgeons and the graduates of the universities the only parties with whom the college had to contend. A third class were now making their appearance, who, since, under the title of general practitioners, have naturally engrossed the greater part of medical practice. These were the apothecaries.

Till the 13th of James the first, they had been united with the grocers, but through the influence of Sir Theodore Mayerne, (as it is generally understood,) a new charter was granted, and the apothecaries were formed into a distinct corporation by themselves. They were to take into council with them, respecting the composition of medicines, the president and censors of the college of physicians; and had power to enter shops, to search and try medicines, etc. and their business was simply to compound the prescriptions of the physicians.

It will not, then, be surprizing, with daily experience demonstrating to us, the utter impossibility of restraining druggists entirely from prescribing, that this separation should have led to a direct interference with medical practice, and the college, consequently, was constantly proceeding against some individual or other of the apothecaries, for transgressing their privileges. How vain this was, we may discover from a passage in a letter from Dr. Winterton, professor of physic in Cambridge, and written in August, 1635. After very complacently speaking of his own efforts to restrain illegal practitioners, he observes that "chirurgeons and apothecaries are sought unto, and physicians seldom, but in a desperate case, are consulted with, when the patient is ready to die, and in this kind we have too many examples."

The college was not, however, disposed to suffer this invasion of their authority, without resistance, and finding the powers granted by the Acts of Henry VIII. and Queen Mary insufficient, they received a new charter, with fresh powers, from James I. in the fifteenth year of his reign, but which charter was never confirmed by act of parliament. In this charter, provision was attempted to be made for Dr. Bonham's case, the powers of the college were extended and more clearly defined. A charter, however, unconfirmed by parliament, can only afford authority for the government of its own body, and James's grant remained a mere dead letter.

To enumerate the several prosecutions which Goodall has recorded to have been instituted by the college, would afford us little instruction. Their general character is the same, excepting that the objects of prosecution were gradually becoming more respectable, and consequently, more dangerous, adversaries. The wants of the public were not supplied by the college; the surgeons were beginning to assume a higher station in society; no efforts of the physicians could prevent their prescribing in certain cases, and the apothecaries, separated from the grocers, were more and more applied to for common cases, and by inferior persons. This evil, if, indeed, it can be called an evil, was probably still more increased, by the confusion into which the

kingdom was thrown by the great rebellion, and thus a breathing time was allowed to the opponents of the college, to collect and increase their strength. After the restoration, this body seems to have become aware that their own monopoly was the real cause of the opposition they met with, and now, for the first time, in the charter of Charles the second, we meet with the various ranks as they now stand, of president, fellows, candidates, honorary fellows, and licentiates. This brings us to the consideration of a question which has been much contested, viz. the relation of the licentiates to the college, and the period of their institution.

The charter of Henry the eighth incorporates six physicians, and all other men of the said faculty in the city of London, under the title of the Fellowship and Commonalty of the Faculty of Physic. The act confirming this charter, adds two to the original six, thus making eight individuals, to whom it gives the name of elects, and any vacancy in these elects, was to be filled up by themselves, out of the most cunning and expert men of and in the said faculty in London, so that he or they, that shall be so chosen, be first by the supervisors. (or censors,) strictly examined. The charter and the act authorise the appointment of four supervisors, who should be chosen "per presidentem et collegium prædictæ communitatis," by the president and college of the said commonalty.

The charter of James the first calls the elects by the name of fellows, and grants the power of calling a convocation, to the number of six persons or more, to consider and consult concerning the college or commonalty. Now, the difficulty here lies in the intention of this selection of fellows, because it is abundantly clear, that the president, fellows, and censors, were only a part of the college or commonalty. There is, however, without doubt, some confusion in the use of these two words, for, while in some places we have them used synonymously, as *college or commonalty;* in other places they are used as distinct parts, or, as *college and commonalty;* and in the charter of Henry the eighth, where mention is made of the election of censors, it is not said per presidentem et collegium seu communitatem; but, prædictæ communitatis, that is, by the president and college of the said commonalty; by which words we might be led to infer, that the two former were the superiors and governors of the latter.

There is yet another source, from which we may, perhaps, infer, that there were always, or, at least, very early after the charter, a body of men who were subject to the government of the college, although forming no part of it. We mean the questions resolved in the seventh year of King James the first, by the Lord Chancellor Ellesmere and the Judges. The number of elects were only eight, and the censors four, making in all, twelve, supposing them all to be different persons. These were accordingly limited in number, yet the judges resolved that all that practised in London, must submit themselves to an exami-

nation of the president and college: and, again, the elects filled up their own body by the act of Henry the eighth, out of the physicians practising in London. Now, here, we think we must at least come to this conclusion, that the college had power over physicians who were not elect, and that such physicians could not practise without the college licence; and farther, that these physicians not being of the elects, had no voice in the choice of the elects, nor in the appointment of president, for the same act of Henry the eighth, obliges the elects to choose one of their own body to be president. If this view of the case be correct, it will little signify whether the licentiates, as at present constituted, were the commonalty or not, because the appointments rest with the president and fellows, and always have rested with them by act of parliament.

Granting, however, what upon this view of the case can we think hardly be denied, that there were licentiates separate from the governing body of the college; the charter of Charles the second certainly first named them, and it may reasonably be inquired how this happened. It is, perhaps, most fair to regard all these charters as partly explaining and confirming the previous practice of the college, but which the circumstances of different periods rendered it necessary to confirm, by more explicit legal provision. The original acts of Henry and Queen Mary, were very full, but vague, and this rendered fresh acts necessary to explain the former, in proportion as the conduct of the college was questioned. As the charter of Charles the second was drawn at very great length, and an attempt was made in it to provide against every inconvenience that had already been experienced, from the want of a plain definition of the power of the college, division was probably merely mentioned on the grounds we have stated; and, perhaps, it may not be unfair to presume, that the encroachments of the surgeons and apothecaries, made the college anxious to call public attention to this, at that period, inferior class of medical practitioners. However this may be, the class of licentiates has, from this period, greatly increased in number, and their names are now regularly published in the college lists. It is not our business, at the present, to discuss the policy of this division, but, it at least stands upon as good ground as the licentiates of the apothecaries' company, who have no voice in the government of the corporation which they contribute to support.

Leaving, however, this point, the charter of Charles the second constituted forty fellows, from whom, the president, elects, and censors, were to be chosen; and this number, a few years after, was increased to eighty. In the mean time, their statute respecting the licentiates, tended to degrade this class, who were not admitted into the number of fellows or candidates, "either because they were foreigners, or not admitted doctors, or not sufficiently learned, or by reason of their too great youth, or suck like causes;" and it must be evident, that placing a foreigner, however learned, upon an equality with men not sufficiently learned, would proba-

bly lay the foundation, as, indeed, it has done, for fresh dissension, especially since the rise of the Scotch Universities, all whose graduates are regarded by the college as foreigners. Leaving, however, this discussion, we again resume our history of the college.

Amidst the almost numberless prosecutions which the college have instituted, they were destined, on one occasion, to contend for their very existence. This was with a Dr. Hugbert, or, as Dr. Goodall entitles him, Mr. Hugbert. Like Dr. Bonham, our acquaintance with this individual only arises from his contest with the college, and we learn that he was the friend of Dr. Marchmont Needham, upon whose acquaintance he could not be congratulated. Needham had been a political adventurer and writer, and had repeatedly changed sides, as he thought his interest suggested. He absconded at the restoration, but, at length, rather owing to the despicableness of his character than any thing else, he was permitted to return to England, where he practised medicine, and, like his friend Hugbert, he contested the authority of the college, on the ground that the act of Henry the eighth, upon which it was founded, had never received the royal assent. This objection, however, was completely overruled by Lord Chief Justice Hales, who, in a very luminous judgment, stated the manner in which the Royal assent had at different times been given, and thus completely established the validity of the act, which, since this time, has never, we believe, been contested.

In the ninth year of William the third, the college established the right of imprisonment for mala praxis, not only against their own members, but against every practitioner of medicine. The action, on this occasion, was brought by Dr. Greenwell, against the censors of the college, for false imprisonment, and the cause was tried before Lord Chief Justice Holt. In the judgement, which was given in favour of the college, Holt, C. J. said that "by act of parliament, the censors are constituted judges of fact, what is a mal-administration (of medicines,) and what is not; and they are judges of record, for they have authority to impose fine and imprisonment. * * Then the censors being constituted judges of the matter, that which they have done as such, they shall not be answerable for." This we believe to he still the power of the college, and it cannot but excite surprise that it should not have been exercised for very many years, and that whatever contests they have been engaged in, have been with medical graduates of foreign universities, not with the St. John Longs, or the ignorant empirics.

Thus victorious in all their contests, an indifferent spectator would have supposed their overthrow and almost total subversion, little less than impossible. They had been successful in every action with the surgeons, the apothecaries, and the foreign graduates; they had established their right of compelling all who would practise medicine in London, to ask their license,

under a penalty of five pounds per month ; they could imprison any one for mala praxis ; from their judgment there was no appeal, and whatever doubt might have existed of the legality of their institution, had been removed by their action against Dr. Hugbert. This prosperity was, however, but apparent. A small, silent, but gradually increasing, stream, was flowing below, undermining all their defences, and rendering them an easy prey to the first assailant.

Notwithstanding the prosecutions of the college, the number of apothecaries had gradually increased, till, in the beginning of the last century, their number is said to have exceeded a thousand. That these were more than would suffice, merely to compound the prescriptions of the physicians, is very certain, and we can only conclude, therefore, that they practised at the same time. The college, however, hoping to contend with them in their own way, viz. by underselling, established several shops or dispensaries as they were called, and, to use their own language, "did agree, and oblige themselves, to visit and give advice to the neighbouring poor, gratis ; when the exorbitant exactions of the apothecaries, for the medicine, rendered the charity of the physicians ineffectual to these poor people, and the obstinate refusal of the apothecaries to comply with any moderate rate, made the case of those poor, desperate ; a committee of the common council, before whom this matter was brought, being sensible of the distress of these people, applied to the college, by way of request, to supply the poor themselves at reasonable rates, which, after a reiterated refusal of the apothecaries, they charitably undertook, and a great number of them entered into a voluntary subscription, for the furnishing medicines, without any prospect or intention to themselves ; * * nor has any dividend or profit of any kind been thought of, or professed, amongst them.

Even this additional weapon was unavailing, and, at length, the application to the college of a man of the name of Leale, who objected to the bill of his apothecary, whose name was Rose, brought the matter to a crisis, and thenceforth deprived the physician of the greater portion of medical practice. Dr. Paris has given the letter of this Leale to the college, which induced them to bring the action. In it he states that he had been taking Mr. Rose's medicines for a year together, and that "after a very expensive bill of near £50, he was forced to apply to the dispensary at the college of physicians, where he received his cure in about six weeks' time, for under forty shillings' charge in medicine.

Rose pretended that he only took the price of his drugs, admitting, however, that he had sent Leale several parcels of physic as proper for his distemper, without the prescription or advice of a doctor, and this he contended was not practising of physic within the statute. The court, however, determined, "that practising of physic within this statute, consists, 1st, in judging

of the disease and its nature, constitution of the patient, and many other circumstances. 2nd, in judging of the fittest and properest remedy for the disease; and 3rd, in directing and ordering the application of the remedy to the diseased. And that the proper business of an apothecary is to make and compound or prepare, the prescriptions of the doctor, pursuant to his directions. It was also agreed, that the defendant's taking upon himself to send physic to a patient, as proper for his distemper, without taking ought for his pains, is plainly taking upon himself to judge of the disease and fitness of the remedy, as also, the executive or directive part; and the plaintiff had judgment."

Against this judgment Rose appealed to the House of Lords, and the language of his appeal plainly proves how little even the apothecaries were then prepared for the extensive change which the reversion of the judgment produced. He hopes, "that selling a few lozenges, or a small electuary, to any asking a remedy for a cold, or in other ordinary or common cases, or where the medicine has known and certain effects may not be deemed unlawful or practising as a physician, when no fee is taken or demanded for the same." To this petition he adds sundry reasons addressed to the selfishness of his judges, and partly to their humanity, viz. that to permit the judgment of the court below, would be,

1st.—"A tax on the nobility and gentry, who, in the slightest cases, even for their servants, cannot then have any kind of medicine, without consulting, and giving a fee, to any one of the college.

2nd.—An oppression to the poorer families not able to go to the charge of a fee; the suppressing of apothecaries being to deprive such poor people and their families, of all manner of assistance in their necessities.

3rd.—A certain prejudice to all sick persons on sudden accidents, and new symptoms arising, especially in acute diseases and in the night, wherein if the apothecary is called, and shall dare to apply the least remedy, he runs the hazard of being ruined, or the patient the danger of being lost."

Dr. Paris has very justly observed, that these observations ought rather to have been addressed to the House of Lords in their legislative, than in their judicial, capacity; and with him we agree, that the conduct of the apothecaries was mean and degrading. Neither can there be any doubt, that the decision to which the House of Lords arrived, was in the very teeth of an act of parliament. But, when all this is granted, we are still compelled to admit, that the decision was founded upon common sense, and supported by the positive wants of the community. The mode of remunerating the physicians, must have placed a large portion of the people beyond the power of applying to them for assistance; and one of two things, it is clear, must follow such circumstances, in a free country. Either the physicians themselves must take smaller fees, and proportion their demands

to the different classes of the population, or they must permit the intrusion of others who would do so. The former alternative they did not meet, and the latter they were compelled to submit to. Neither, to speak truly, do we think that this decision was an unfortunate one. From the physicians, it is true, it immediately abstracted the greater part of medical practice; nor, perhaps, were the public so much gainers as might be imagined, considering the very inefficient education which the apothecaries had, at the period. But it laid the foundation for a much more general diffusion of knowledge, and yet retained and sustained the respectability of the profession. Had the physicians met the latter alternative, nothing could have prevented the profession from being degraded. The lowest practitioners would still have been physicians, and the arts and frauds which are practised by such men, would have reflected discredit upon the whole body. The abrupt division, however, of the two parts, and the positive laws by which the higher class was bound, prevented this degradation, and, at the same time, afforded a mark to which a high-minded apothecary would naturally aspire. The physician retained his place in society, and, for a long time, was the positive superior of his fellow labourer. Time, however, if it has not entirely removed this superiority, has softened down all the asperities by which it was accompanied. The courtesy of the one readily grants to station and to custom, a respect, which often cannot be demanded on the ground of superior attainments, so much has the education of the general practitioner improved. Yet still the physician finds his place even among the most highly talented. In a profession so arduous as that of medicine, so beset with difficulties, so open to doubtful disputations, who does not occasionally experience the desire of farther assistance; who would not gladly consult, at times, with a mind at least equal, if not superior, to his own? At the same time it must be allowed, even by those who are most liberally disposed, that the physician must always have more leisure to keep up his knowledge, that his time, less occupied even in full practice, will afford larger opportunities for study, and thus, that his information will often be more extensive and more accurate, than that of a man of equal abilities, laboriously engaged from morning to night, in the active duties of his profession, can possibly be.

It is, indeed, with regret, a regret not unaccompanied with profound scorn, that we have seen attempts made, within the last few years, to separate in mutual hostility, these two branches of the profession. Nothing, we will venture to say, is more impossible than the object proposed, viz. the total abolition of the physicians as a distinct class; and nothing, therefore, can be more idly malignant, than the attempts we have alluded to.

They may, and probably will, indeed, have the effect of exciting "dissonant janglings and envious regrets," in a profession which might be "a paradise, flourishing in joy and rest, if men would cheerfully conspire in affection, and helpfully contribute

to each others content." Farther than this, they cannot go. The divisions of our profession are the growth of time; they have the sanction of experience and reciprocal benefits. It is not the abuse of one party against the other, that will decide a question, nor the strenuous exertions of self interest, which will support arrangements not founded in manifest utility. From the public, the present arrangement originally sprang; by public convenience it will be finally settled, and even should those be mistaken, who believe the continuance of the present system adviseable, nothing can be gained to the general good, by the slanderous imputations which have been so freely scattered abroad. That considerations like these will ever influence the hired defamer, who is paid to calumniate, and calumniates because he is paid; or that it will weigh with those who, desperate in property, and destroyed in character, consider that no change can make their situation worse, we have not the temerity to believe; but, still, there are some whose minds are not yet cankered by envy, nor poisoned by malice, who may be misled by the affectation of anxiety for the public benefit, and may be taught to believe that slander is an allowable weapon, if the end proposed be good. Upon these we would feign hope, that our observations will have some effect, and that in the eloquent language of Barrow, they will "discern, how exceedingly better it is to be helpful and beneficial, than to be mischievous and troublesome to one another. How foolishly and unskillfully they judge, that think by unkind speech and harsh dealing, to allay men's distempers, alter their opinions, or remove their prejudices, as if they should attempt to kill by affording nourishment, or to extinguish a flame, by pouring oil upon it."

With these observations we shall conclude the present article, which brings us down to an æra in the history of the college, when the whole arrangements of the profession underwent a revision. In the next article, we shall have to relate contests between the college and its licentiates, and we propose, at the same time, to review, at some length, the condition of the profession in all its parts; to compare the relative situation of each, and to state what is the nature of those alterations, by which the public may be more efficiently protected from ignorance and imposture, and medical practitioners still be supported in that high and dignified station, so different from what they hold in every other civilized community.

J. D.

ARTICLE III.

Observations on Mineral Waters.

BY THE REV. GEORGE COOKE.

Malvern, Oct. 22, 1831.

Gentlemen,

Mineral waters owe their efficacy to the soils through which they pass, and with which they are impregnated.

The knowledge on mineral waters has been much improved by the scientific geological map of Mr. Smith, and the subsequent publication of Mr. Philips, his nephew, on the strata of soils from the Humber to the Tees, by which it is proved that the most celebrated mineral waters are found in the lias soil.

The lias soil consists of potash, soda, magnesia, lime, clay, iron, and bitumen, combined with the sulphuric, muriatic, and carbonic, acids.

All these ingredients, excepting clay, are found in the Cheltenham waters; and clay is found in the lias soil on the north-east coast of Yorkshire, where alum is manufactured.

The Pittville, and Cambray, spa waters, very much differ in their proportionate combinations with carbonic acid.

If the base is upheld by the carbonic acid, soluble weight cannot be obtained by concentration, when the carbonic acid is driven off by evaporation, the base is deposited, and two grains, only, of soluble weight, were obtained by concentration, in each ounce of fluid, in the Cambray spa water.

But, in the Pittville spa water, the bases were upheld by the permanent acids, and one hundred grains of soluble weight were obtained by concentration, in each ounce of fluid.

The Cheltenham waters have been analyzed by Dr. Fothergill, Sir Humphrey Davy, Messrs. Brande and Park, and Dr. Scudamore.

Dr. Fothergill and Sir Humphrey Davy seem to have analyzed a gallon. Messrs. Brande and Park, and Dr. Scudamore, a pint.

	Dr. Fothergill. GRAINS.		*Sir Humphrey Davy.* GRAINS.
Sulphate of Soda and Magnesia,	480		386
Muriate of Soda,	15		44
Muriate and Carbonate of Magnesia,	25		0
Selenite,	40		0
Oxid of Iron, nearly	5	Carbonate of Iron,	3.5
		Water,	564.5
Water omitted,	555		1000

	Messrs. Brande & Park. GRAINS.		*Dr. Scudamore.*
Muriate of Soda,	50		46.40
Sulphate of Soda,	15		28.64
Sulphate of Magnesia,	11	Muriate of Magnesia,	2.02
Sulphate of Lime,	4.5	Muriate of Lime,	3.07
	80.5		80.13

They all omit the sulphate of potash. Dr. Fothergill, Sir Humphrey Davy, and Messrs. Brande and Park, omit the muriate of lime, which Dr. Murray, of Edinburgh, considered as the salt of the greatest efficacy in the Bath and the Cheltenham waters.

In 1820, Dr. M'c Cabe, one of the physicians of the Cheltenham dispensary, published an account of the Cheltenham waters. He mentions that the sulphate of potash, the muriate of lime, and the muriate of iron, had been omitted by those chemists, who had analyzed the Montpelier spa water, previous to 1819, and that Mr. Thompson acknowledged the sulphate of potash to be a principal ingredient in his Cheltenham salt, in a letter which Dr. M'c Cabe published, Dr. M'c Cabe examined the salt, when it was crystallized, and found the figure to be the sulphate of potash. These observations were confirmed by Dr. Thomas, a physician of the Cheltenham dispensary, in a subsequent publication.

The sulphate of magnesia gives the heaviest saturated solution of any salt given in the analysis of Dr. Fothergill, Sir Humphrey Davy, Messrs. Brande and Park, or Dr. Scudamore. If, therefore, the Cheltenham water, by concentration, gives a heavier solution than the sulphate of magnesia, the salt, probably, is either the muriate of magnesia, the muriate of lime, or the muriate of iron. The muriate of magnesia is detected by the carbonate of potash; the muriate of lime, by the oxalic acid; the muriate of iron, by the tincture of gall or prussiate of potash.

The errors of analyzers have been caused by not attending to the changes which take place by evaporation, and by not stopping the evaporation at the saturated point of different salts.

If muriate of soda is added to a saturated solution of sulphate of magnesia, in a boiling state, the salt will be the sulphate of soda, from sulphuric acid having a stronger affinity to soda than magnesia.

If sulphate of potash, and sulphate of soda, are in the same fluid; if the evaporation is not stopped at the proper time, the sulphate of soda will be the covering crystal, and the sulphate of potash not visible.

A probable mode of analyzing mineral waters nearly with accuracy, is, first to take the soluble weight, then test before evaporation; then crystallize the different salts. When the fluid is heavier than a saturated solution of sulphate of magnesia, test for the muriates of magnesia, lime, and iron.

The sulphuric acid is detected by barytes; the muriatic acid by the nitrate of silver; the carbonic acid, by lime water; potash and soda, when combined with the sulphuric acid, are detected by the form of the crystal, and their different degrees of solubility. Lime is detected by the oxalic acid; magnesia and clay are deposited by lime water or carbonate of potash.

If mineral waters can be accurately analyzed, they may be accurately imitated.

Potash, soda, magnesia, lime, bitumen, and iron, may be held in solution, in any proportional combinations, by the sulphuric, muriatic, and carbonic, acids.

The Seltzer water, according to the analysis of Bouillon, la Grange was prepared by Doidge, soda manufacturer, of Malvern, and a gentleman said that he had drank the Seltzer water, daily, for months, at the spring, and that the Seltzer water, prepared by Doidge, had exactly the same flavour, but more effervescent, which he thought an improvement.

The alum shale and the cement stone, are found in the lias soil.

The alum mine is burnt with furze and brush wood, then water is poured on the burnt mine, which becomes impregnated with potash, clay, and magnesia, combined with sulphuric acid.

The cement stone is burnt, and ground to a fine powder, and being deprived of its fixed air, is not decomposed by air or water, when properly prepared.

In the process of alum making, the magnesia and iron are separated from the clay by the muriate of potash; the potash combines with the sulphuric acid and clay, and forms alum; the muriatic acid combines with the magnesia and iron, and remains in the fluid after the crystallization of the alum.

By a process, the iron is separated, by lime, from the fluid, and the sulphate of magnesia is formed.

By another process the iron is left in the fluid, to give a tonic quality to the sulphate of magnesia, and an aperient chalybeate is formed, which unites the virtues of laxative and tonic qualities.

Dr. Loy, of Whitby, says, neither the sulphate nor tartrate of iron can be compared to this preparation, the one is much too heating, and the other very disagreeable, and neither sufficiently laxative; the health of his patient, in all respects, kept pace with the medicine; if, by accident, it was omitted for a few days, the symptoms proportionally increased, and were again diminished by a repetition of the remedy. Dr. Loy says, the appetite of his patient had been good, and the bowels regularly open, ever since the medicine was first taken, though laxative medicines have usually no permanent effect upon the bowels.

If an ounce of any salt is dissolved in a pint of pure water, the salt may be known, when the crystal is not visible, by the weight of the solution, or the increased bulk of the fluid, the soluble weight being in proportion to the small quantity, the increased bulk to the great quantity of water of crystallization in the salt. If the same quantity of muriate, and of sulphate, of soda is dissolved, in the same quantity of water, the muriate of soda will give a proportional increase of soluble weight; the sulphate of soda a proportional increase of bulk, according to their waters of crystallization.

It is difficult to learn by scales, the soluble weight of a mineral water, when only a few grains are held in solution in a gallon; but, if a glass bubble is made to sink, at a temperature above sixty, one degree of temperature may be visibly weighed, and it

has been found by experiment, that three degrees of temperature are equal to two grains of muriate of soda, in a pint of water.

These observations on mineral waters, may be proved by experiment.

Believe me, Gentlemen, your's,
GEORGE COOKE.

ARTICLE IV.

An account of two remarkable cases, in a letter to Dr. Hastings.

BY MR. WATSON, SUEGEON, STOURPORT.

My Dear Sir,

As much difference of opinion exists as to the propriety of amputation, during the progress of traumatick gangrene, perhaps the following case, in which the practice was successful, may be acceptable to you. I likewise enclose a case of disease of the urinary organs, which terminated in an unusual manner.

Believe me, very truly, your's,
K. WATSON.

Case I.—Successful amputation at the Shoulder Joint during the progress of Gangrene.

October 1, 1831.—George Tolley, æt. 18, labourer, got his arm entangled in some machinery moved by steam, and used for grinding tools. The radius and ulna were fractured about the lower third of the arm; there was an external wound, but it did not communicate with the fracture. The elbow was elevated laterally, and it was subsequently ascertained that there was a second fracture of the radius, immediately below its head; and that the olecranon was split longitudinally. The dislocation was reduced, and the fractured bones placed in a proper position, and treated in the usual manner. Nothing particular occurred till the 6th; he had passed a restless night; complained of great pain in the arm; pulse 100; tongue furred. To have calomel and jalap till it operates, and then saline mixture, with Battley's sedative.

7th.—Medicines have not operated; arm much swelled and very painful. To have an enema; leeches to be applied, and a fomentation of decoction of camomile, with muriate of ammonia, to be constantly used.

8, p. m.—Bowels moved twice; complains of pain in the side; has some cough; respiration hurried; pulse 120. To continue the fomentation; to take Battley's sedat. and sulph æther at bed time, and to repeat it, if the pain or difficulty of breathing should render it necessary.

8th.—Breathing and pain much relieved by the opium and æther; pulse 120; arm very much swelled as high as the insertion of the deltoid muscle; many dark-coloured blisters on different parts of the arm; gangrene appears to be rapidly spreading

up the limb. He was so much exhausted, that I did not think that any means would save his life. I mentioned amputation as the only chance, but did not press the operation; he, however, shortly determined to submit to it.

I considered that, as it was very uncertain how high the muscles had been injured by the broad strap which had been rolled round his arm during the accident, it would be advisable to remove the limb at the shoulder joint, more particularly so, as the integuments about the joint, though much swelled, were not gorged as they were below the insertion of the deltoid muscle. I had only to tie two vessels, and very little blood was lost. The flap formed by the deltoid, was fixed by two stitches and a few turns of a roller. Four hours after the operation, pulse steady at 120; has slept two hours. To continue the sedative in saline mixture.

10th.—Slept several hours during the night; pulse 115; discharge very putrid and offensive; complains of thirst. To have effervescing mixture.

11th.—Going on well. Pulse 100; bowels have not beeu moved. To have conf. sennæ, and an enema if necessary.

12th.—Pulse 90; discharge profuse, and very offensive. To take diluted sulphuric acid; the bandages to be wet with a solution of chloride of lime.

13th.—Discharge profuse and highly putrid. Dressings removed. Cellular substance of the flap sloughing; skin sound. To have ale, mutton chop, and quinine.

19th.—Sloughs separated; going on well.

25th.—Ligatures came away; discharge healthy; wound healing rapidly; appetite good; convalescent.

Upon examination of the limb after its removal, the vessels were found gorged with bloody serum. A quantity of unhealthy pus was found below the fracture, and which extended into the elbow joint.

Case II.—Suppuration of the Kidney, and perforation of the Fundus of the Bladder.

March 6, 1831—A. D. æt. 15, complains of freqnent inclination to make water, accompanied by pain and bearing down, and a great discharge of blood, sometimes mixed with urine, at others, nearly pure. She has never menstruated; her breathing is very short; has no cough; the heart's action is perceived much more extensively over the chest than is usual.

As there were indications of calculus, a sound was passed into the bladder, but there was no stone.

It was evident that there was organic disease of the urinary organs going forwards, but the immediate object was to check the hæmorrhage, which otherwise must soon be fatal. Spirits of turpentine, in small doses, were directed for her, but it did not produce much effect. While taking the tinct. ferr mur. the discharge of blood became much less, though the pain and irritation

continued, accompanied by a discharge of pus mixed with the urine. Cicuta, opium, and the warm bath, produced but little relief, and she continued to emaciate, slowly and gradually, till the tenth of Sept. when she was seized with the usual symptoms of peritonitis, and she died upon the twelfth. After her death, I was informed that she had laboured under symptoms of disease in the urinary organs, for eighteen months before I saw her, for which she had been treated, in the usual way, by leeches, blisters, &c. &c.

The body was examined 24 hours after death.—The folds of the pleura, on the right side, were firmly united; the lungs studded with tubercles, many of them in a state of suppuration.

On the left side there were no adhesions; there were tubercles in the lung, but in a less advanced stage than on the right side. A few ounces of fluid were effused in this side. The heart was small but free from disease, as were the large vessels.

The liver was sound.

The whole of the peritoneum was inflamed, more particularly so in the neighbourhood of the right kidney. Patches of lymph were seen adhering to the intestines, and floating in a fluid which had the smell of urine, and of which about two pints were collected.

The ureters were much larger than usual. The kidney, on the left side, large, flaccid, and pale in colour, but not otherwise diseased. The right kidney was about four times its usual size, filled with pus of the consistence of lead, which was contained in a number of capsules. The coats of the bladder were generally thinner than common, and its fundus was perforated by a number of small ulcers like shot holes, through which the urine had escaped into the cavity of the abdomen. K. W.

ARTICLE V.

An account of some Cases in which the ERGOT of RYE was advantageously used.

BY J. K. WALKER, M. D., HUDDERSFIELD.

MOST of your readers have perused, in the medical periodicals of the day, cases of decided relief from the use of the secale cornutum, in a variety of hæmorrhagic affections, from the uterus, kidneys, lungs, &c.; and who is there that does not hail with satisfaction, this accession to our therapeutick resources, in a class of diseases so alarming and so dangerous. It is with this, as with most of our potent remedies, we are well enough disposed to avail ourselves of their efficacy, without understanding their precise mode of action. But, is it not surprising that, after such a lapse of time, since the first employment of this singular vegetable production, so few attempts have been made to ascertain its capabilities, or, how far it is applicable to other than hæmorrhagic affections? I know, indeed, that in larger doses, it is apt to induce great heat and pain, and, occasionally, vomit-

ing; but, in the ordinary proportion, in which it is usually given, it is rare to meet with this result. Not that there are not states of the system, in which it may be improper to administer it, and there are, besides, occasional peculiarities of constitution, which are adverse to the employment of this drug; but, this holds true of many other remedies as well as this; and every one's own judgment will point out to him the expediency of caution in the use of any remedy, where we have little but analogy to guide us in its right administration; and experience will soon enable us to say, what are the kind of cases most likely to fall within the sphere of its remedial agency. I am induced to make these observations, from having lately administered the ergot of rye, in two instances, with considerable effect. The first of these was the case of a man, who had long laboured under serious hepatic affection, of which, he had been repeatedly relieved by the usual remedies. About two months ago, he perceived a material increase in the quantity of urine, and as he was in the decline of life, and of a shattered constitution, it was naturally regarded as an alarming symptom. Finding no relief from other remedies, he was ordered to take six grains of the powdered ergot of rye, at first only thrice, and afterwards, four times a day. In a few days, he was himself the first to notice the decrement in the quantity of the urinary discharge; but, I am sorry to say, that the sequel of the case was of a gloomy description. It is true, we had no diabetic symptoms to combat, but, in lieu of them, we had others which baffled all relief. There were indications of a general hydropic diathesis. The abdomen became tumid and tense, and now the urine was scanty and turbid. The usual remedies were resorted to, but without success, for in less than a fortnight from the appearance of the dropsy, the case terminated fatally.

The second case is that of an elderly man, still living, but who has laboured under general anasarca for the last six weeks, and, more recently, has experienced great dyspnœa. This last, however, was, for a short time, relieved, *by a hæmorrhage from the lungs*, which had continued for several days, (even after the application of a blister to the sternum, as well as other remedies,) when the use of small doses of the ergot of rye was conjoined with his other medicines, for the space of two or three days; after which, we had the pleasure to witness the cessation of the hæmorrhage, without any apparent increase in the other symptoms.

I am not prepared to assert, that the disappearance of blood was solely attributable to the ergot, because there were other medicines exhibited at the same time; but it was clear that no bad effect resulted from its use. Nay, there was a sort of pause in the progress of the disease, for a short time. The loss of blood probably gave greater freedom to the respiration, but its violence was too great to be allowed to go on unchecked.

These two cases, I admit, can by no means be considered decisive of the power of the ergot over the kidneys or the lungs, yet they are such as will admit me to feel less hesitation in resorting to it, in certain states of those viscera, in future. Nor can I doubt that further investigation will bring to light other important properties, so as effectually to nullify the opinion that its effect is confined to the uterus, and to vindicate its claim to higher importance in the scale of remedies, than has hitherto been assigned to it.

ARTICLE VI.

Case of obscure and protracted Pregnancy, read before the Medical Society of London, Oct. 1831.

BY MR. W. C. DENDY,

Surgeon to the Royal Infirmary for diseases of Children.

THE physiology of the gravid uterus, is one of the most difficult and interesting subjects submitted to our investigation. The pathology of the organ, especially the study of those morbid changes by which its natural and healthy functions are obstructed, is also a subject of equal importance and interest.

The deviations from the natural process of parturition, may be comprehended under three conditions or species.

1.—Where there is a deficiency of the nutrient or retentive power of the uterus, terminating in premature expulsion or abortion.

2.—Where, at the usual and healthy period of parturition, the fœtus, having arrived at its full growth, after some ineffectual or laborious efforts of the uterus for its extrusion, slips through a rent in the parietes of that organ, into the cavity of the abdomen.

3.—When the full-grown fœtus, from some insufficiency of expulsive power, remains for an indefinite period within the uterine cavity.

It is to the third form of these derangements that my present observations refer, and, of which, the following case presents an interesting illustration.

Mrs. Snow, aged 41, received, (about the middle of the year, 1828,) a blow on the abdomen, since which time, she has constantly experienced various degrees of smarting and tenderness in the part injured. At the commencement of 1830, the catamenia became very irregular, with sometimes an interval of five or six weeks, and then continuing for a fortnight together. Notwithstanding this irregularity, she considered herself pregnant, and began her reckoning in April. After this period, the abdomen continued to increase in size. During the remaining course of the year, 1830, she was frequently indisposed, complaining of excessive langour. The kidnies secreted very

sparingly, but the bowels were regular; the catamenia, occasionally, as she tells me, recurring. Towards Christmas, she became more indisposed. Her sleep was exceedingly disturbed with very frequent startings and dreamings. In December, although the patient's feelings were very different from those during former pregnancies, (she had, I think, four children,) yet she herself, and Mrs. Brown, an experienced midwife, were almost certain that they felt the child move.

It was not until early in February, 1831, that any symptoms of labour supervened. Mrs. Brown, who was engaged to attend, visited her one evening, as she thought herself in labour. There were, however, no distinct pains, but rather constant uneasiness; and she had a most profuse sanguineous discharge, two or three chamber pots, *as I was informed*, being filled in the course of the day: this continued for about three days. A gentleman in the city now visited her, but as there were then no indications of labour, he very properly did not interfere. I believe, however, from the symptoms, and state of the os uteri, his opinion of the ultimate result was, at this time, unfavourable. The flooding having recurred, Mrs. Brown requested me to see her. There was a profuse discharge of firm coagula, resembling the lochia. Although there were no actual pains, I thought it right to make examination, but, from the acute tenderness complained of, this examination was hasty. I, however, distinctly felt that the os uteri was but very slightly dilated, and gave the sensation, to the touch, of a hard cartilaginous ring. I applied cloths wet with cold vinegar, to the abdomen, and gave her infusion of roses, with dilute sulphuric acid, and the sedative solution. The discharge was soon checked, indeed, had nearly ceased. The abdomen was, at this time, tender to the touch, and as large as at the full time of pregnancy. It was not a uniform swelling, but several firm ridges appeared, as if there were cysts about the abdomen. I had never, then, however, been able to observe any symptoms like parturition, and I think the patient herself doubted her pregnancy. I visited her occasionally, and finding her more quiescent, I contented myself with watching her carefully. She now frequently left her bed, and sometimes walked out a short distance from her house. She appeared evidently improving, until July, when she was attacked with the form of diarrhœa then prevalent: this reduced her exceedingly. On one or two occasions during my visits, I made examinations per vaginam. In August, the condition of parts was changed; the os tincæ was still tumid, but it was rugous and bloody. I could now introduce my finger without much difficulty; there was not the slightest obliteration of the cervix, and nothing like membranes could be felt. The abdomen now became smaller, but evidently contained a diffused fluid. There were three distinct tumours visible, and by careful examination, superficially, I thought I could discover a fœtus, and its relative position. A round hard tumour, on the left side, resembling the head, and two

smaller tumours at the umbilicus, and at the crista of the right ileum, resembling the breech and the feet I could not avoid surmising that the case might be extra-uterine, as the uterus did not seem to be the containing cavity. This opinion, also, was entertained subsequently by the medical friends who occasionally visited with me. She now continued to get weaker, but, about the middle of August, the ascites had almost disappeared. The tumour now assumed a fleshy or doughy consistence, and would have imparted, at this period, no idea of the existence of a child. Anasarca appeared on the left leg.

On the 25th of August, I found the os tincæ, &c. in the same condition, except that no pain was complained of from the touch. In September, she had frequent nausea, and inability to take food; the pulse was weak and fluttering; diarrhœa; coldness of extremities; tongue coated brown; lips and teeth covered with sordes. The tumors were become still more fleshy. Dr. Blundell was kind enough to visit her with me: the answers to his questions were such, as not to indicate, in any degree, even the existence of pregnancy; but, although from the superficial examination which he made, (the patient being apparently near her dissolution,) no decided diagnosis could be formed; yet Dr. Blundell was, on the whole, of opinion that it was not an extra uterine case. Soon after this she was evidently sinking, and in about a week she died.

Examination; 30 hours; post mortem.—The abdomen measured 2 feet 9 inches round; 1 foot 3 inches from ensiform cartilage to symph. pubis, the patient's height being 5 feet 1 inch. Two pints of yellow serum were in the cavity of the peritoneum. The uterus, which nearly filled the abdomen, was lobulated and discoloured: the ovaries, fallopian tubes, the round and broad ligaments were healthy, except that they were closely adherent to the sides of the uterus. The right side of the transverse arch of the colon and the omentum, diminished but thickened, were matted firmly to the right side of the fundus. The colon was of a dark violet colour; the uterus, which measured 2 feet 2 inches round the fundus and cervix, and 2 feet round the widest part of its body, was of variegated colours; its veins turgid. A tumor on the left side, purple and disorganized; another on the right side, of a deep crimson colour, and adhering to the colon and omentum. Various points of the peritoneum of the liver and small intestines, adhered slightly to the uterus. On slitting open the uterus, the parietes appeared very thin; there were no amniotic membranes nor fluid; but an adventitious tissue could be peeled from the internal surface of the uterus, very dissimilar in its structure to decidua; but *feculent matter*, without meconium, immediately flowed both from the incisions and from the ragged cervix uteri, in considerable quantity. In the uterus lay a full-grown fœtus, its head resting on the cervix; its breech and its feet being pressed firmly against the two discoloured swellings, which it was evident were in no degree formed by

increased or morbid growth; the placenta flattened, and, with its vessels, obliterated, lay with a detached edge, slightly over the os uteri, and separated from the child, the funis being divided. The fœtus, a female, appeared to have been dead about two months, and, judging from general impression, resembled more a child that had lived for two or three weeks, than a fœtus dead within the womb.

On raising the bones of the cranium, which were compressed and flattened to their original and natural form, a cavity was formed between the cranial vault and the brain, capable of containing about half a pint of fluid, the cerebral mass itself, which appeared pulpy, but covered by its membranes, not occupying more than half the cavity of the cranium. The bones of the thorax were also compressed; its contents, and also those of the abdomen, being slightly decomposed, and much diminished. The cuticle was peeling, and the joints of the ancles and shoulders were partially exposed, but there was no septic fœtor.

My own patient observation of the abdomen in this case, strengthened by the occasional opinion of others, assures me of the identity of the tumefaction in February with that in Sept. thus proving a pregnancy of 15 or 16 months. The case of Mrs. Snow, however, differs in its essential points from the cases related by Dr. Cheston, in the transactions of the Medico-Chirurgical Society, in which the muscular parietes of the uterus were burst, and a cyst was formed, probably for the fœtus, by its peritoneal covering: it differs, also, from other cases placed on record.

It does, however, bear some analogy to the case related by Mr. Gunning, (Med. Jour. Oct. 1827,) which is there, I think, improperly termed extra-uterine. It is not very uncommon, for the uterus to retain a dead fœtus, at the early months, for some time ere it is expelled. I am informed of an instance where symptoms of abortion appeared at the term of three months; the woman, however, completed exactly her full period of pregnancy, and was then delivered of a fœtus evidently of only three months' growth. This retention of the inanimate fœtus, is explained, by an absence of that peculiar sympathy of the uterus, which, even in primary extra-uterine pregnancy, when its cavity is almost unoccupied, causes it to be affected with the pang of parturition. It must, however, be some very extraordinary condition, in which this sympathetic action is suspended, and the state of uterine *pregnancy* protracted so far beyond its usual term. Reflection on this peculiar case, will naturally lead to this questien. Was the morbid change which the body of the uterus had undergone, the *cause or eonsequence* of the undue retention of the fœtus? this question is, I confess, somewhat difficult of solution. It is certain that disease existed in the os and cervix uteri, at the time of my first examination, and, from the pain experienced subsequent to the injury in 1828, there is reason to believe that some chronic inflammatory action had been established. Under this condition (although the organic

functions of the body are usually either suspended or much deranged,) the fœtus was not prevented the attainment of its full growth; but, that inexplicable principle, the vita propria of the uterus, produced some slight contractile effort about the due period, sufficient only to separate the placenta and cause hæmorrhage. We see, then, that disease did not vitiate, nor destroy, the secretory or nutrient function of the uterus, but that its *parturient* efforts were so much deranged, that it became almost an inert cavity.

This circumstance, this indisposing effect of chronic uterine disease, might, by analogy, tend to explain, or to substantiate, those cases of supposed protracted pregnancy, which have proved the fertile sources of litigation, (that of the question regarding the Gardner peerage, for instance,) but we cannot, by experience, assert that the child, if retained, would continue to live after the mother's natural time was come, knowing, as we do, that about the fortieth week, all the nutrient or placental vessels undergo a process of shrinking or contraction, closely assimilating the mode of detachment of ripe fruit in autumn.

By albuminous deposit, under this chronic inflammation, was the os uteri converted into a semi-cartilaginous ring, which subsequently assumed an ulcerative process. These conditions, then, formed the impediments to successful parturition.

But the most conspicuous morbid changes, depended on what I should term, not secondary disease, but rather a salutary process, the vis medicatrix naturæ. When nature is obstructed in her healthy action, she attempts to overcome the difficulty, by establishing some subsidiary means. On the failure of uterine effort in this case, immediately was commenced that beautiful series of actions by which the uterus might be relieved of its burden; plastic lymph cemented the fundus uteri to the colon, and, protected by this adhesion, an ulcerative process was commencing, in order that a canal might be established between the cavities of the uterus and colon. Coincident with this process, a separation of the bones of the extremities was going on, chiefly in those parts approximating the diseased portions of the uterus. These important duties of nature, however, are not assumed without an adequate expenditure of vital power; and, if the energies of the system be not sufficient for the progress of these changes, as in the analogous cases of exfoliation and sloughing, the constitution will, as in this case, yield in the struggle.

I have stated that, at no time could I discriminate any symptoms indicating real parturition. Had I been able to do so, I should, of course, have adopted manual assistance; but the apparently convalescent progress of the patient, in the early part of my attendance, and the sudden depression of power at a later period, and the absence, be it remembered, of labour pains, with even a doubt whether pregnancy really existed, prompted me rather to hope for the successful issue of the natural efforts, than to have recourse to that artificial expansion and delivery, under the pains and fatigue of which, the woman would, in all probability, have suddenly sunk exhausted.

ARTICLE VII.

Quarterly Reports of the Worcester Dispensary.

BY ROBERT I. N. STREETEN, M. D., WORCESTER.

1830. THIRD QUARTER. JULY TO SEPTEMBER.

	Canal.	*Sev.*	*City.*	*Sub.*	*Coun.*	*Tot.*
Abscess,	1			1		2
Amenorrhœa,			1			1
Anasarca,	1					1
Angina Pectoris,	1					1
Ascites,		1				1
Bronchitis,	1		4	3		8
Cephalalgia,	1	1	1			3
Cholera,	2		1			3
Contusion,		1				1
Cynanche Tonsillaris,		1				1
Debility,	1					1
Diarrhœa,	1					1
Dyspepsia,	5	3	9	1	1	19
Erythema,		1				1
Fever,	4	11	6	2		23
Furunculus,	1					1
Gravel,			1			1
Hæmoptysis,	1			1		2
Hæmorrhois,	1					1
Hepatitis,		2	1			3
Hydrops Ovarii,				1		1
Hydrothorax,					1	1
Inflamed Leg,	1					1
Leucorrhœa,	1					1
Marasmus,		1				1
Melancholia,				1		1
Menorrhagia,				1		1
Midwifery case,	1					1
Ophthalmia,		1				1
Otitis,				1		1
Peritonitis,				1		1
Phrenitis,			1			1
Phthisis,	8	2	1	1		12
Pleuritis,				1		1
Purpura,		1				1
Sciatica,			1			1
Tenia,			1			1
Ulcer on Cornea,	1					1
Urticaria,	1					1
Unknown,		1				1
Total,	34	27	28	15	2	106

Deaths, 8; three from fever, one from abscess of the mouth after fever, one from bronchitis, one from cholera, one from phthisis, and one from phrenitis.

Re-admissions from last quarter, 25, three of which, viz. two cases of phthisis and one of lumbar abscess, terminated fatally.

1830. FOURTH QUARTER. OCTOBER TO DECEMBER.

Amaurosis,	1				1
Aneurism of the Aorta,			1		1
Angina Pectoris,	1				1
Ascites,		1			1
Bronchitis,	1	1	8	1	11
Burn,	1				1
Cancer Uteri,				1	1

	Canal.	*Sev.*	*City.*	*Sub.*	*Coun.*	*Tot.*
Cephalalgia, ...			1		1	2
Colic, ...	1		1	1		3
Diarrhœa, ...	2	1				3
Dysentery, ...			1			1
Dysmenorrhœa, ...		1				1
Dyspepsia, ...	3	7	6	2	1	19
Dyspnœa, ...		1				1
Fever, ...	5	17	3			25
Fever, infantil. rem.				1		1
Hæmorrhois, ...		1				1
Hæmatemesis, ...	1					1
Hepatitis, ...		1			1	2
Hernia, ...			1			1
Hysteria, ...		1				1
Icterus, ...		1				1
Inflamed Leg, ...	1					1
Inflamed Sub-Maxillary Gland, ...		1				1
Inflamed Urethra, ...				1		1
Leucorrhœa, ...	1					1
Mania, ...					1	1
Marasmus, ...				1		1
Meningitis, ...			1			1
Nephritis, ...			1			1
Ophthalmia, ...			1			1
Paralysis, ...			1			1
Paralysis Agitans, ...			1			1
Peritonitis, ...	1			1		2
Phthisis, ...	1	2	4	1		8
Pleuritis, ...	2	1	1	2		6
Pneumonia, ...			1			1
Pruritus, ...					1	1
Rheumatism, ...	3	1	1	1		6
Stricture of the Colon, ...		1				1
Syphilis, ...	1					1
Ulcer on the Cornea, ...				1		1
Total, ...	25	40	34	14	5	118

Deaths, 5; three from phthisis, one from fever, and one from meningitis.

Re-admissions from last quarter, 14, one of which, a case of phthisis, had a fatal termination.

Tabular view of the prevalence of Fever in the several Districts.

	Total.	*3rd Qr,*	*4th Qr.*	*Canal.*	*Sev.*	*City.*	*Sub.*	*Coun.*
Cases of Fever,.....	48	23	25	9	28	9	2	0
Total Cases, ...	224	106	118	59	67	62	29	7
Proportions, 1 in	4.46	4.41	4.72	6.55	2.39	6.89	14.50	—

Fever.—Fever, during this period, was exceedingly prevalent in the Severn district, nearly three-fifths of the fever cases occurring there. The greater number of these were in Union Court, Cripplegate; scarcely a family in the place escaping without one or more of its members being affected. The back of this court opens upon a piece of moist meadow land, which is frequently flooded when the river overflows its banks. The water usually remains for a considerable time, and the drains and ditches about, are liable to become choked up. The consequence is, necessarily, an accumulation of stagnant water, mud, and other offensive matters, the effluvia from which is quite sufficient to give rise to the unhealthiness of the locality. The head was much affected in several of the cases, and typhoid

symptoms were not uncommon, considerable depression of the powers of the system being experienced from the very commencement. In the earlier stages, local bleeding seemed to be of service, but a moderate use of stimulants became necessary towards the close; the tongue cleaning, and the countenance losing its dusky hue, under the use of the infusion of cascarilla and beef tea. Sometimes, though more sparingly, a little port wine was allowed, and, apparently, with advantage.

One of the fatal cases occurred in a female, who, after previous severe illness, had undergone a great deal of fatigue from travelling in a weak state. Almost immediately on her arrival in Worcester, she was attacked with fever of a typhoid type, attended with head-ache, low muttering delirium, brown tongue, quick, weak, fluttering pulse, and extreme prostration of strength, under which she rapidly sunk, no re-action having taken place from the commencement of the disease. The other fatal cases did not fall under my notice.

Amaurosis.—The case of amaurosis was that of a child, the subject of spectral illusions, reported at length in a former number of this Journal.

Angina pectoris.—There were two cases admitted with symptoms of angina pectoris. The subject of one of them was a middle-aged man, who had, in addition to the paroxysms of angina, a chronic bronchial affection, and strong palpitation of the heart, arising from hypertrophy of the left ventricle. He was a moulder at the iron foundry, and consequently exposed to great alternations of temperature, with severe labour. Some years back he had rheumatism, since which, he had been subject to the symptoms he complained of, when seen at the dispensary. Under the use of calomel and opium, he experienced considerable relief from the bronchial symptoms, and the action of the heart was somewhat moderated, but, of course, little hope of permanent benefit could be entertained. The other case occurred in an old man, who laboured, also, under palpitation of the heart, and severe dyspeptic symptoms. The use of tincture of digitalis in infusion of calumba root, with an occasional dose of blue pill, proved of the greatest service. He recovered his appetite, the powers of his stomach improved, the palpitation of the heart diminished, and the fits of angina became of much less frequent occurrence, and were less severe. In about six weeks time, he discontinued his attendance at the institution, and has since enjoyed tolerable health.

Bronchitis.—The cases of inflamed bronchial membrane were, as usual, less frequent during the warm months, than at the commencement of the year. There were nineteen in all; eight in the third quarter, and eleven in the fourth. Of these, twelve, or nearly two-thirds, occurred in confined situations in the city; illustrating, what has been before remarked, the effect of a close and impure atmosphere, either in predisposing to, or inducing, diseased action of the lining membrane of the pulmonary system.

One case, occurring in a man aged 42, of broken down constitution, terminated fatally.

Cholera.—The fatal case lingered on for some time after the urgent symptoms were relieved; diarrhœa, with bloody and muco-purulent matter in the stools, continuing, in spite of remedial measures, till the patient sunk.

Colic.—This case was interesting, on account of its near approach to inflammation. There was violent twitching pain about the umbilicus, relieved by firm pressure; a confined state of the bowels, a full pulse, and white tongue. The symptoms did not give way to the measures employed (calomel and opium, followed by a cathartic draught,) no evacuation from the bowels being obtained. The pulse, next day, became smaller, and somewhat harder; the pain more permanent, and was increased, instead of being relieved, by pressure; and there was some anxiety of countenance. He was immediately and copiously bled, and a number of leeches were directed to be applied as soon as he rallied from the effects of the bleeding, to be followed by the poppy fomentation. The pain was instantly relieved, and the bowels acted freely before the next morning. He soon recovered his strength, but required aperient medicines, in large doses, for some time afterwards.

Dyspepsia.—There were thirty-eight cases of disordered digestive organs, fifteen of which occurred in the city, ten in the Severn district, eight along the line of the canal, three in the suburbs, and two in the country. The proportion to other diseases, was considerably greater in the city, than in the Severn or canal districts, being 1 out of 4.13. The sufferers were chiefly females, occupied in the glove sewing and other sedentary avocations, four only, of the whole number, being males.

Hæmatemesis.—The subject of this case was a female, aged 71. The bleeding, though very copious at first, was soon checked, but a constant spitting, or, rather, flow of mucus, was brought up from the stomach; and there was, at the same time, a good deal of tenderness at the epigastrium, on pressure. Leeches and blisters were applied, with the effect of relieving this pain, but the mucus continued to flow. Small doses of opium, at first, seemed to have some effect in controuling this, but ultimately failed, as well as every other remedy that was tried. The smell was, at times, very offensive to her, and she suffered great distress from the continuance of the discharge night and day. At length, the spitting was much diminished under the use of the nitrate of silver, and she regained her strength considerably, but the spitting had not entirely ceased when last seen. She was quite free from cough throughout, the respiration was easy, and the fluid came up without the slightest effort.

Paralysis Agitans.—In this case, which occurred in a man, aged 47, of sedentary habits, there was constant nodding motion of the head, and shaking of the whole body, with head-ache, great pain, on pressure, over the cervical and superior dorsal

vertebræ, and tenderness of the epigastrium. The tongue was white, and the pulse weak. Leeches were applied over the spine, and he took alterative and anodyne medicines, with light nourishment, and was dismissed, cured, in about six weeks.

Phthisis.—The phthisical cases were twenty in number; of which, four, or one-fifth, proved fatal. The number of males and females affected, was equal. Three of the males were engaged in active occupations; one was a parer of leather; one a potter at the china works; the remainder of the males, and all the females, were engaged in glove cutting, glove sewing, or other sedentary employments. The treatment pursued was founded upon the principles mentioned in last report. Marked benefit was experienced, in one case, for a time, by frequent small bleedings, from four to six ounces being drawn at a time, conjoined with nourishing diet. The patient took, also, a grain of the sulphate of zinc, with four of extract of conium, three times a day, and an anodyne mixture to allay the cough. Under this treatment, she regained both flesh and strength, and hopes were entertained of recovery; but the extreme severity of the early spring of the present year, put an end to these hopes. An exacerbation of the sympotms came on during a few days of severe frost, and she sunk rapidly afterwards.

Purpura.—This case occurred in a boy who had previously had several attacks of the disease, for the last of which, he came under treatment at the dispensary, as was noticed in a former report. The same means which proved successful before, were again had recourse to, and with similar results.

ARTICLE VIII.

On some of the Diseases which have been most frequent amongst Children, during the present year.

BY CHARLES W. TURNER, M. R. C. S. AND L. S. A.

During the past winter, hooping cough and measles prevailed to a great extent in London; I also observed a few cases of small pox. Towards the summer of the present year, (1831) several cases of scarlatina occurred. Scarlatina had been prevalent at Whitechapel for some time, but the first case that I saw was in a child, who was brought from thence to a small court in the city. At the time scarlatina was introduced, measles was in this court, so that we had both diseases existing, in a confined neighbourhood, at the same time, and, perhaps, to this circumstance may be attributable, that modification of some of the symptoms observable in these cases; I mean that the cases of rubeola were attended with tenderness and enlargement of the parotid and submaxillary glands; whilst, on the other hand, some of the cases of scarlatina were not without the catarrhal symptoms, such as the soreness of the eyes, together with the lachrymal

discharge and stuffed state of the nose; still these symptoms, as attached to scarlatina, may have arisen from the extreme severity of the attack, for all the cases of scarlatina in this neighbourhood, were scarlatina anginosa, and very severe. We not unfrequently see measles attended with cynanche tonsillaris, indeed, it is this circumstance which renders the diagnosis difficult for a time; but, as to the enlargement of the salivary glands in measles, it is an occurrence which I have not before met with, and I can only account for it, upon the principle of the two contagions existing simultaneously, and in such a confined space. Scarlet fever is very frequent at the present time, but the cases are of a much milder description, and in no other instance have I seen such a combination of symptoms. The cases of rubeola, which occurred previous to this report, were quite of the ordinary kind; in some cases, the symptoms were more severe than in others, but not in any were there otherwise than those which commonly attend a favourable case of this disease; such, for instance, as the catarrhal symptoms, together with great heat of skin, quick pulse, &c. and pain of the head, but which never amounted to delirium. The following short case of measles, will best illustrate the symptoms:—

Case i.—Joseph Whiting, æt. 4. This child was attacked with cold shivering, extreme heaviness of the head, and pain across the forehead, attended with delirium, intense heat of skin, great thirst, dry tongue, rapid pulse, considerable soreness of the eyes, and profuse lachrymal discharge; *the parotid and sub-maxillary glands are much enlarged and very tender,* and he has a troublesome cough. The eruption appeared on the third day, and the symptoms continued very severe till four days after its appearance.

The patient recovered by the usual means, viz. salines and antimonials, attending to the state of the bowels, and securing a free ventilation in the apartment.

Case ii.—Maria Loft, æt. 4½. This child had been unwell a week before the eruption appeared. The principal features in this case, exclusive of the common symptoms, were the *swelling of the parotid and sub-maxillary glands,* on the left side, and the severity and continuance of the delirium., which was, more or less, from the commencement, increasing in severity till after the eruption, (which was very partial,) had been out four days. The convalescence of this patient was tedious: for some time after she was troubled with cough, and the breath was much impeded; but she ultimately recovered.

I will now proceed to relate a case or two of scarlatina anginosa, and, it will be observed, that in each case, the efflorescence was ushered in by symptoms of great severity. The first case that I shall allude to, proved fatal in a short time.

Case i.—Charles Blackleach, æt. 18 months. July 29, 1831. He has been ailing for these few days past; a slight efflorescence appeared on the 26th, but remained only a few hours; the con-

stitutional disturbance was by no means great, nor did the child appear to suffer any increase of symptoms by the retrocession of the eruption, till last evening. The child looks heavy, and is very restless and fretful; he is constantly rolling his eyes; this morning he had three convulsive attacks, the last of which continued some minutes; the skin is intensely hot, and the thirst excessive; the pulse 180, but no irregularity; the tongue is covered in the centre with a tenacious kind of mucous, the tip and sides are red, the papillæ are distinct, but not elongated; the bowels are relaxed; the throat is greatly inflamed, and the tonsils are enlarged, which added to the *stuffed state of the nose and other catarrhal symptoms*, considerably impedes respiration. The eruption has again made its appearance to-day, but still very partially; it is principally confined to the body, and the upper and lower extremities. The child was directed to be placed in a warm bath for ten or fifteen minutes. Ordered, ℞ Antimon. tart. gr. $\frac{2}{3}$, potassæ nitr. ℈i. sacchari ʒss. M. et divide in chartulas, vi. Detur i. 3tiis horis. Applic. lotio evapor capiti.

30th.—The appearance of the efflorescence is much the same as yesterday. He is very drowsy, and almost always sleeping; when awake he is very restless, and appears to be delirious; he has been convulsed several times to-day; the throat is much inflamed, and the tonsils are enlarged; the difficulty of breathing continues as yesterday, if any thing, rather worse; some swelling of the parotid and sub-maxillary glands; the tongue is furred, the lips parched, and the thirst unabated; pulse 184; bowels relaxed; he passes green stools. Apply a leech to the throat, and another to the chest. Ordered, ℞ Hydr. c cretâ et pulv. rhæi a gr. iij. pulv Jacobi, gr. ij. M. ft. pulv. hac nocte sumend. Repet. pulv. febrifug.

31st.—The child was relieved by the application of the leeches, and continued better till 10 o'clock this morning, when it had a return of the convulsions, which lasted nearly an hour, and at 12 o'clock on the same day, he died. No inspection permitted.

The next case is the brother of the one above related. Alfred Blackleach, æt. 4. July 20, 1831. The eruption of scarlatina, in this case, was preceded by great febrile excitement; the skin is of that pungent heat, which so strikingly characterises this disease; the pulse is very quick, and, occasionally, irregular; the throat is inflamed, and the tonsils are enlarged; great heaviness and *soreness of the eyes*, and he is, occasionally, delirious. This is the second day of the eruption. Sumat mist. sal. ℥ss. c vin. ant. tart. 4tis horis.

25th.—The efflorescence has nearly disappeared; he is constantly moaning and never quiet, unless leaning against his mother or lying down; the skin as before; the thirst undiminished; the tongue is red, clean, and polished; the bowels are confined; he passes plenty of urine. The parotid and sub-maxillary glands are very enlarged and tender, and there is a *copious watery discharge from the eyes and mouth; the nose is much*

stuffed; the throat is inflamed, but to no great degree. Ordered, ℞ Antimon. tart. gr. i.; potassæ nitrat et sacchari, a 3ss. M. et divide in chartulas, vi. Sumat unam 3tiis horis.

R. Hydr. c creta gr. iij.; pulv. rhæi, gr. vii. M. ft. pulvis hac nocte sumend.

26th.—He has passed a very restless night, and continues very heavy and drowsy to-day; he mutters a good deal, and, occasionally, grinds his teeth; the skin is hot; the thirst excessive, and the pulse quick; the tongue is red and very dry; much throbbing of the temporal arteries. Applic. hirudines, ij. temporibus. Sumat ol. ricini, 3ij. cras mane. Contin. in usu pulv. febr.

A small abscess, which has been forming for some days on the back part of the scalp, discharged itself to-day.

27th.—The leeches bled freely; he is less drowsy to-day, and free from delirium; this I ascribe more particularly to the copious discharge from the abscess, than to the leeches, although, perhaps, each may have had its good effects. The eruption has disappeared; the skin is reduced in temperature, and feels rather harsh; the parotid and sub-maxillary glands continue enlarged and tender; the bowels are still bound. Sumat ol. ricini, 3iij. cras mane. Contin pulveres.

28th.—He was very restless last night, and towards the morning, had a return of the delirium; the countenance looks very dull and heavy; the tongue is clean and moist; the skin dry; bowels bound; the urine abundant, and deposits a mucous sediment.

℞ Calomel et pulv. antimonialis a gr. iij. pulv. jalapæ, gr. vij. M. ft. pulv. hac nocte sumendus.

℞ Mist. salinæ, ℥vi. liq. antim. tart. 3iss. potassæ nitrat. ℈ij. Sumat. ℥ss. 4tis horis.

No further notes were made of this case. The ulcer at the back part of the head, sloughed a good deal, and left the bone quite denuded. It was necessary to keep up the child's strength during this process, which was effected by ammonia, quinine, &c. and as good a diet as his friends could procure for him. The child is got pretty well, but, as yet, the dead bone has not separated.—Sept. 15, 1831.

The following case is more severe than either of the preceding, and the catarrhal symptoms well marked.

William Routledge, æt. 5. He was attacked on Saturday, July 23, with vomiting and purging, attended with great febrile excitement, drowsiness, and delirium; in the evening, a slight rash appeared.

24th.—I saw him, for the first time, to-day. There is an eruption, of a scarlet hue, upon the face, neck, and loins, in which may be seen some elevated points. He is constantly putting his hand to his head, and the delirium runs high; the throat is much inflamed; the tonsils are enlarged, and studded with specks of a yellowish colour; the parotid and sub-maxillary glands are much

enlarged on either side; *the eyes are very weak, and there is a copious lachrymal discharge*, in which portions of puriform mucus may be seen; the secretion from the nose and mouth is very abundant; the voice is thick and indistinct, and, from the soreness of the throat and fulness of the nose, his breathing is greatly obstructed, but more particularly when he is just falling off to sleep, when he suddenly jumps up and gasps for breath, which is relieved, in a short time, by coughing once or twice; but he cannot be induced to spit up, I have not, therefore, an opportunity of ascertaining the nature of it, but it appears to me that the secretion of mucus is very great, and that it gradually accumulates around the tonsils, thus nearly closing the already contracted aperture, and giving rise to these symptoms. The heat of skin is very great; the pulse quick; the tongue is covered with a yellowish matter, which admits of being scraped off, leaving the tongue tolerably clean underneath; the papillæ are distinct, but not elongated; (this is a circumstance which I remarked in nearly all the cases.) He has a troublesome cough, but without expectoration; the bowels are bound; the urine scanty. ℞ Pulv. Jacobi, gr. ij; pulv. rhæi. gr. vii. M. ft. pulvis hac nocte sumend. Sumat ol. ricini ʒij. cras mane. Two leeches to be applied to each parotid gland.

26th.—The leeches bled freely, but the glands are not reduced in size. The eruption is more distinct than yesterday; the bowels have been copiously relieved; the motions of a dark and offensive nature; the throat is much inflamed; the respiration difficult, and the breath smells very disagreeable; the secretion from the eyes and mouth lessened: he still complains of pain of the head, and is, occasionally, delirious; the skin is hot and dry; pulse 130, and somewhat irregular; the sides of the tongue are clean and dry, the centre white. ℞ Mist. salinæ, ʒvi.; potassæ nitrat, ℈ij; liq. antim. tart. ʒiss. M. sumat, ʒss. ʒtiis horis.

27th.—The eruption has disappeared; he is free from delirium, but very heavy and drowsy; the breath is much impeded, but, on the whole, this symptom is less urgent to-day; the inflammation of the throat much the same, but it has a cleaner appearance; there is a good deal of tenacious-looking matter adhering to the teeth; the skin dry; the tongue very red; thirst diminished; bowels rather confined; urine scanty; he has a troublesome cough. Contin. mist. sumat ol. ricini, ʒij. statim.

28th.—He has had no return of the delirium, but is very drowsy, and has become rather deaf; the features have been swollen for two or three days; the throat is cleaner, but much inflamed yet; the tongue is preternaturally red, but moist; the skin has a more natural feel, and he has less thirst; the pulse is very quick; the bowels rather confined; urine more abundant. ℞ Calomel, gr. iij.; pulv jalapæ, gr. v. M. ft. pulvis hac nocte sumend. Contin. mistura.

30th.—Much improved, and going on well in every respect, but he is very low and weak, and has, towards the evening, a little œdema of the lower extremities. ℞ Quinæ sulphat, gr. vi. tr. digitalis, gtt. xvi.; tr. scillæ, ʒss.; aq. ℥iv.; sumat ℥ss. ter quotidie.

The dropsical symptoms in this case, as well as his brother, (whose case I have not related,) became exceedingly urgent; the emaciation was very great, and when the effusion took place, it was so generally diffused, as really to give him a plump appearance; the face was quite filled out, the abdomen greatly distended, as well as the cellular tissue of the scrotum and inferior extremities, and, from the difficulty of breathing and other symptoms, I was fearful effusion would take place into the chest. The medicines which proved so serviceable, not only in this case but in two or three other cases, consisted of small doses of squill and digitalis, with the supertartrate of potash; giving, at bed-time, three grains of the hydrarg. c creta; but, when the patient could be induced to swallow a pill, a grain or two of blue pill was added to the squill and digitalis, and a few grains of jalap, combined with the supertartrate of potash: this latter plan succeeded better than the former.

With respect to the nature of the dropsy as following scarlatina, I can look upon it in no other light than as inflammatory; and in this view I am amply borne out by the symptoms and treatment of these and other cases. It was with the greatest difficulty I could reduce the bounding pulse in the case last recited, and when this was once accomplished, I was able to control it by the digitalis, and then the fluid began to diminish. In any case where dropsy supervened on scarlatina, provided the patient's strength was at all adequate to the loss of blood, I should not hesitate at once to employ moderate local depletion, and I am induced to say this, in consequence of a circumstance which occurred in the treatment of W. Routledge, which was, that when the dropsical effusion had taken place to the extent which I have stated, he had an attack of pleuritis; here I was compelled, although the patient was in this weak and emaciated condition, to use local depletion; this I did, arresting the flow of blood when he became rather faint, and the pain of the side mitigated; twice I applied leeches, and he was able to bear the loss of blood better than I expected; he then continued the digitalis, &c. and with decided good effect; for, before, it had exerted little or no influence, whilst now, the fluid was rapidly absorbed.

As it has been said that the urine, in this form of disease, contains albumen, it may be as well to state, that I examined the urine of these patients, and was unable to detect the slightest trace of albumen.

ARTICLE IX.

On the Tumours which form within, and upon, the Eye-lids.

BY MR. MIDDLEMORE,

Assistant Surgeon to the Birmingham Eye Infirmary.

The eye-lids are very frequently the seat of tumours of various kinds, which, although they do not, in the general, lead to any serious result, occasion a good deal of inconvenience, and constitute an unpleasant personal blemish. The inconvenience to which I particularly allude, is, an uncomfortable feeling of weight of the eye-lid, an irritable state of the eye, or a disposition, on the part of that organ, to become inflamed from a slight cause, a cause totally inadequate to the production of inflammation in the natural and healthy condition of the eye and its appendages.

The tumours which form in, and upon, the eye-lid are very various, and may be conveniently divided into those of a malignant, and those of a benign, character.

The malignant tumours of the eye-lid are of two kinds; the first consisting of that indurated scirrhus mass which precedes the existence of ulcerated cancer; the second, comprising that knotty tuberculated state of the skin, and subcutaneous cellular membrane, which invariably precedes that peculiar form of ulceration so well described by Dr. Jacob,* and which every person of observation must have noticed, and which is perfectly distinct from every other form of malignant ulceration with which we are acquainted. Now, it is not my intention to enter upon the investigation of this, the first division of my subject, for that would lead me to the consideration of ulceration of the lids, which I do not now profess to discuss, but I deem it necessary to say a few words respecting the diagnosis of benign and malignant tumours of the lids.

The scirrhus induration and the peculiar tuberculation of the lids, to which I have just referred, never, or very rarely, occur in early life, they are always attended with a certain degree of pain, and the skin cannot be moved upon them, but seems, in the general, to have either participated in, or become attached to, the induration and tuberculation, which constitute the first stage of the disease. The tubercle of the eye-lid which generally, though not always, precedes the establishment of the intractable ulceration of that part, with the peculiarly and irregularly knotted and tuberculated state of the margin of the ulcer, has never occurred so early as the age of forty, under my own observation, except in one instance, and, in that case, the subject of the disease was a poor dyspeptic Scotchman, who, although according to his own representation only forty years old, appeared to

* Dublin Hospital Reports, vol. 4.

be at least sixty. The benign tumours of the lids most frequently occur in the early and middle periods of life, are not associated with pain, unless accompanied with inflammation, (which is no necessary part of the disease,) and they are, besides, when situated in the subcutaneous cellular membrane, very moveable, and the skin may be easily and freely moved upon their surface; of course I am not now referring to those tumours which arise from, or beneath, the tarsal cartilage. These few circumstances will constitute a sufficient general means of diagnosis, between the benign and malignant tumours of the eye-lids.

The benign tumours in the eye-lid, may be conveniently arranged under two divisions, those which possess, and those which do not possess, a cist.

There are several varieties of benign tumours of the eye-lids, which do not possess a cist: the first consists of a solid mass of a firm, and by no means richly organized, texture, which is so blended with the cutaneous and cellular tissue, that it can never be removed in an entire state: the second comprises all those tumours which arise from the tarsal cartilage: the third includes those vascular productions or nevi, which are so often noticed to occur in this situation: the fourth comprehends the verrucæ, the small warty growths which are most frequently noticed at the ciliary margin of the eye-lid: and the last variety which I shall now mention, is the small, painful, subcutaneous tumour, distinguished by the excessive suffering it occasions. To this enumeration of the benign tumours of the lids, which are not surrounded by a cist, I should, perhaps, add the little inflammatory swelling at the tarsal margin, termed hordeolum, for it certainly does not appear to have any well-defined cist.

With regard to the encysted tumours of the eye-lid, I may enumerate the following:—1. The adipose tumour. 2. The common steatomatous tumour. 3. The phlyctenular tumour. 4. Tumours arising from the enlargement of a cutaneous follicle. 5. Tumours consisting of a fluid of various kinds, colour and consistence, occasionally containing hair, which may either be floating in the fluid contents of the cist, or attached to, and growing from, its surface.

Tumours not completely surrounded by a well-defined cist.

Solid tumour connected with the skin and the subcutaneous cellular membrane. This form of tumour may occur at any period of life, and more commonly results from local injury, particularly where that injury has induced ecchymosis of the lid. It does not occasion any severe pain, rarely acquires a large size, and is only inconvenient by increasing the weight of the eye-lid, and consequently by rendering its movements upon the eye-ball less promptly and pleasantly accomplished than usual. The tumour is generally smooth upon its surface, and may be moved in conjunction with the skin, upon the tarsal cartilage, but the integument cannot be moved upon its surface. If an

attempt be made to remove it, it is found to be blended with the cutaneous texture; and it is also found to be impossible to take the whole of it away, without also removing a portion of the skin. It is not desirable, therefore, to attempt the extirpation of such tumours by a surgical operation, unless they have acquired a considerable size, and produce great inconvenience, and perhaps inflammation, by their magnitude, and have resisted the adoption of other measures for their removal. I have generally effected their absorption, by recommending the persevering and careful infriction of either the strong mercurial, or the hydriodate of potash ointment.

Tumours arising from the tarsal cartilage.

Morbid growths may proceed from the tarsal cartilage, either on its cutaneous or mucous aspect, but they very rarely indeed originate in the latter situation. The tumours which arise from the tarsal cartilage, are of various kinds, but they are generally somewhat firm at their origin, but, in their progress, their interior softens, and their exterior is covered with condensed cellular membrane, except at that part where they arise from, or are attached to, the tarsal cartilage. When these tumours are of small size, the state of things is such as I have now represented, that is, the cellular membrane is condensed around their exterior, their interior is soft and perhaps fluid, and the tarsal cartilage (presuming the tumour to arise from its cutaneous aspect,) is scarcely at all thinned by its pressure; but the skin of the eye-lid is obviously projected, so that when the palpebra is drawn over the globe of the eye, there is a definite and distinct prominence pointing out the site, and indicating the magnitude of the tumour; the skin is also distinctly and freely moveable upon the surface of the tumour, but the tumour itself cannot be moved upon the tarsal cartilage. Now, if this tumour increase in size, the external prominence will be augmented, and on everting the lid, it will be seen that the cartilage is absorbed, and that there is a circular mark or ridge indicating the extent of the base of the tumour, and also pointing out the extent to which the cartilage has been absorbed, and, in fact, there is nothing in the space comprehended within the circular ridge to which I have just referred, to prevent the contents of the tumour from being in direct contact with the globe, but the mucous lining of the eye-lid.

It is not necessary to represent the progress of a tarsal tumour of a benign character, arising from the mucous aspect of the tarsal cartilage, which, although an extremely rare occurrence, is always rendered evident, when it does take place, by symptoms so well marked, that it is not possible to mistake it, nor to overlook the actual site of the morbid production.

I have pointed out the origin, and traced the progress, of the common tarsal tumour, and have represented the symptoms by which it is distinguished from other tumours of the lids, up to that stage when the cartilage is absorbed, and the attenuated and

florid mucous membrane alone forms its posterior boundary; and it is scarcely necessary to remark that, unless remedial measures be employed at this stage, the mucous membrane will also become removed by absorption, and the fluid portion of the contents of the tumour will be discharged, but the solid portion will remain, and there will also remain a ragged ulcerated surface, which will occasion severe and prolonged irritation. It is therefore evident that this state of things ought to be prevented from taking place, by the removal of the tumour before it has led to the destruction of the palpebral conjunctiva.

Treatment.—When these tumours are small, it is adviseable to direct the patient to rub upon their surface for ten minutes, once or twice a-day, a small quantity either of the strong mercurial, or the hydriodate of potash ointment, and to prescribe a little aperient medicine, not, however, as some have imagined, with a view of removing some constitutional defect upon which these tumours depend for their existence and continuance, for I cannot discover that such tumours do arise from any peculiarity in the constitution, but to enable the individual to bear the friction of the ointment, without causing any unpleasant degree of cutaneous irritation. But, if these means fail, if the tumour increase in size, if it have acquired a considerable magnitude, and if on everting the lid, it is found that the tarsal cartilage is absorbed, it would be improper to continue the friction, and the tumour ought to be removed by an operation, without further delay. Of course, after having stated the pathological condition of parts under these circumstances, after having stated that the skin is healthy, and may be freely moved upon the tumour, and that the tarsal cartilage is absorbed, and that the attenuated mucous lining of the lid constitutes the posterior boundary of the tumour, it is evident that it ought not to be removed by an incision of the skin; if an attempt be made to remove such a tumour externally, the skin, the fibres of the orbicularis muscle, and the mucous lining of the eye-lid, (which constitutes the posterior boundary of the tumour,) must all be divided, and, of necessity, an aperture formed in the lid throughout its entire texture; and the patient be consequently subjected to a needlessly painful and protracted operation, and to the infliction of an injury which may occasion much subsequent inconvenience, and, perhaps, deformity.

The mode of curing such tumours, which I have adopted in a vast number of cases, is as follows:—having directed an assistant to evert the lid very completely, I divide, with a fine scalpel, that portion of the mucous membrane which constitutes the posterior boundary of the tumour, in a direction parallel with the ciliary margin; and, if the contents of the tumour are solid, I make a second incision, so as to join the former one at each extremity, and to include a portion of the mucous membrane; and having grasped the portion of the palpebral conjunctiva, to which the tumour is attached, draw it gradually and gently outwards; but, if any adhesions to the surrounding cellular

membrane exist, a little dissection may be necessary; the tumour may not, under such circumstances, be readily withdrawn from the submuscular or the subcutaneous cellular membrane in which it may be situated, without the aid of the scalpel. But, if the contents of the tumour are partly solid and partly fluid, I merely make an incision, quite through the palpebral conjunctiva, throughout the entire length of the tumour; and, having waited until it has ceased to discharge, I introduce a probe through the opening in the mucous membrane, and move it about freely so as to break down its entire texture, as completely as possible; and I have only in recollection one instance in which this method of treatment has failed to effect a perfect cure.

It is adviseable to prescribe a little purgative medicine after an operation of this description, and, with a view of preventing the occurrence of severe inflammation, it is prudent to suggest the observance of a temporary abstinence in diet, and to direct the eyes to be kept quiet, and to be bathed frequently with some cooling collyrium.

Nævi of the eye-lids.

I do not intend to enter upon the consideration of those enlargements of the eye-lid produced by the formation of nævi, on the present occasion, but I cannot avoid suggesting that, in all cases of this description, the tumour should be vaccinated in various parts of its surface, at such a distance, that the inflammation of one pustule shall extend to that accompanying and surrounding another, so that their combined influence may comprise the perfect obliteration of the cells of the nævus, or of the vessels which constitute this morbid enlargement.

Warts of the eye-lids.

Warts may form at any part of the eye-lids, but they generally grow from its ciliary margin. They are easily cured, either by excision, by the use of caustic, or by the application of a fine ligature. When they are large, with an extensive base, the application of caustic, or the operation of excision, is preferable; but when they are small in size, and particularly when they arise by a slender pedicle, the application of a fine hair or thin ligature, to the base of the pedicle, is to be preferred. These verrucæ are most commonly observed at that part of the eye-lid where the cutaneous becomes gradually changed into a mucous surface; but, I have not remarked that they are especially prone to follow either any particular form of inflammation, or of disease, either of the eye or its appendages; or to succeed to any particular kind of application which may have been used for the removal of some morbid affection of the eye. The characters of these warts upon the eye-lids, are precisely the same as those of verrucæ in other situations.

Painful subcutaneous tumour of the eye-lid.

I have noticed, in three instances, a small tumour situated in the subcutaneous cellular membrane, which has produced an extreme degree of pain. The skin immediately upon these tumours has always been moveable, and has possessed a bluish appearance; the tumour itself has been small and round, and excessively hard, and has, in all these instances, been perfectly moveable upon the tarsal cartilage. I had an opportunity of examining one of these tumours, after the death of the patient in whom it occurred; but, in the other two instances, I was requested to remove them, in consequence of the severe suffering they occasioned. The tumour I examined after the individual's death, did not appear to have any nervous connexions adequate to explain the suffering it produced, no *visible* nervous twigs were connected with it. It was composed of a hard substance of a greyish texture, interspersed with blue lines or streaks; the cellular substance was somewhat condensed around its exterior, but did not envelope it in that intimate manner, which would justify me in saying that it constituted a cist, in the ordinary acceptation of that term. In the two instances in which I removed a tumour of this description from the eye-lid, the pain, which was previously most tormenting, immediately ceased, and did not return, nor were any fresh tumours produced. I may mention that the pain was not equally severe during the whole period of the existence of these tumours, although it was never entirely absent; it seemed to vary with the state of the individuals health, and to be increased and modified by other circumstances which exercise an influence over other local maladies.

If a person were unwilling to permit the extirpation of such a tumour, I should advise that the strong mercurial ointment, blended with opium, be rubbed into them, two or three times a-day, unless the friction itself produced a material aggravation of the patient's sufferings.

Hordeolum.

Hordeolum is a small, hard, painful tumour, situated at the ciliary margin of the eye-lid. It is, at first, a minute, red, slightly prominent tumour, of an extremely painful nature, and it is then exquisitely painful, unless it suppurates, which is always accomplished very slowly. Prior to the occurrence of suppuration, the little tumour is exceedingly hard, but, as soon as that process commences, it becomes soft at the suppurated point, the pain is diminished, and the formation of matter is evinced, by the existence of a white spot in the centre of the hordeolum. The suppuration is generally very slight, so that considerable induration remains for some time after the matter has been discharged; instead, however, of suppurating when it has arrived at its greatest degree of developement, it may remain as a hard, not very painful, pimple, and gradually disappear; and this

state of things has been termed grando, on account of the form, the size, and the hardness, of the little tumour so designated.

Treatment.—The treatment of hordeolum, in its early and inflammatory stage, consists in the employment of cooling lotions to the eye, and the use of active purgatives. If, however, the pain and swelling continue without evincing any disposition to subside, in spite of the adoption of antiphlogistic treatment, or if suppuration has commenced, the eye should be frequently bathed with tepid water, or fomented with some warm vegetable decoction, and a bread and milk poultice, enclosed in a fine linen bag, should be applied during the night. The matter should be discharged at an early period after its formation, and the same warm applications and poultices, recommended to be used prior to the occurrence of suppuration, should be continued after that event has taken place, until the hordeolum subsides into a minute indurated pimple, when the use of the citrine ointment will be generally sufficient to complete the cure.

Some persons, and especially those of a scrofulous habit, or those who are affected with chronic ophthalmia and tinea, are very prone to the formation of hordeolum; and it will sometimes happen that several of them will form at the same time, and in such cases it will be found that there is something wrong in the health, which requires attention. A course of purgative medicine, attention to diet, and abstaining to use the eyes much in the observance of objects requiring minute and attentive vision, will generally cure this tendency to the formation of hordeolum. I know that some surgeons consider the formation of hordeolum, as a direct consequence of a faulty condition of the general health, but, we must admit that, whatever may be their cause, their progress is materially influenced by various circumstances connected with the part in which they occur, for in those instances where several of them appear at, or nearly at, the same time; or in those other cases, where one or more appear on the removal of prior ones, their progress is often very different, they do not advance to their developement with equal celerity, their mode of termination is frequently dissimilar, and their magnitude is not by any means precisely the same. It must, therefore, be admitted that, in the consideration of these inflammatory productions, the local aptitude and condition of the part, as well as the constitutional state of the patient, must be taken into consideration, in estimating the cause of their appearance, in viewing the history of their developement and mode of termination, and in deciding upon the plan of treatment it may be necessary to adopt for their cure.

Encisted Tumours of the Eye-lids.

Common adipose tumour of the eye-lid.—This variety of tumour consists of a mere secretion of fat, of a pale yellow colour, surrounded by a delicate cist. It is not granular and hard, as adipose productions in other situations sometimes are, but it is

soft, and very frequently lobulated, the small portions constituting the lobuli being enveloped in a fine cellular cist, which are, eventually, all surrounded by the larger cist previously mentioned. This tumour is generally found at some distance from the ciliary margin of the eye-lid, in the loose cellular texture which exists in such abundance, immediately behind that margin of the tarsal cartilage, which is most distant from its ciliary edge. A tumour of this description is not by any means richly organized, and, as far as I can discover, does not arise from local injury. It may acquire a considerable size, for this is one of the characters of this description of tumour in whatever situation it may occur, and it is distinguished chiefly by the doughy inelastic sensation it communicates on pressure. It is always moveable in the cellular membrane in which it was originally deposited, and, unless it has acquired a very large size, it may be freely moved upon the tarsal cartilage, and the skin may be moved upon it. It is not necessarily attended with pain, either at its origin or during its progress; but it may give rise to a painful degree of uneasiness, when very large, by the tension of the skin, and the pressure upon the tarsal cartilage, and the eye-ball, it may then produce.

Treatment.—I have known these tumours absorbed by the persevering use of the strong mercurial, or the hydriodate of potash ointment; or, by simply rubbing the skin upon their surface, with a smooth hard body, such as a plain gold ring. But, if they are large, if they have resisted these measures, and particularly if the skin has become inflamed, they had better be at once removed by an operation.

Operation.—These tumours should always be removed externally, and this may be accomplished without the slightest difficulty, by merely stretching the lid upon the globe of the eye, and steadying the tumour, whilst an incision is made upon its most prominent part; the mere division of the skin is generally all the cutting that is necessary, for if, when the skin is completely divided over the whole extent of the tumour, the morbid product be grasped by a hooked forceps, it may be withdrawn from its situation with the utmost facility. In removing these, and all tumours of the eye-lids from without, it is desirable to make the incision in the loose part of the integument where the skin of the eye-lid naturally forms a fold or wrinkle, if the situation of the tumour will admit of its being removed at this part; and, of course, if no contradicting circumstances exist, the incision should be made in a direction parallel with the tarsal margin, in the course of the fibres of the skin and the orbicularis palpebrarum. In this operation, the only part necessarily divided is the skin, but it may be requisite to cut through the fibres of the orbicularis muscle; but in removing such a tumour from the under surface of the lid, it would be necessary to divide the mucous membrane, and to cut through the tarsal cartilage, and even then, its removal could not be accomplished without great

difficulty; and in those instances where the adipose tumour is placed in the eye-lid, behind that margin of the tarsal cartilage most distant from the ciliary border of the eye-lid, the difficulty of removing it from within the palpebræ, by a section of its mucous lining, would be still greater.

Common steatomatous tumour of the eye-lid.

These tumours are situated in the subcutaneous cellular membrane; they do not arise from the tarsal cartilage, nor have I ever observed them between this cartilage and the mucous membrane; they are generally of small size, and seldom acquire any considerable degree of magnitude. Their structure is firm and solid, sometimes even semi-cartilaginous, the central part being somewhat less consistent, and they are surrounded by a cist, composed of the surrounding, firmly-condensed, cellular membrane. There is seldom more than one of them present at the same time, which is most commonly situated in the cellular membrane, behind that portion of the tarsal cartilage which is most distant from the ciliary margin of the eye-lid. I have seen them, in other instances, in the cellular tissue beneath the skin, and anterior to the orbicularis muscle; and again, in the cellular membrane between the tarsal cartilage, and the fibres of the orbicularis muscle.

Treatment.—If the means suggested for promoting the absorption of the adipose tumour of the eye-lid fail to effect the absorption of these tumours, and particularly if the skin has become inflamed, and they are evidently less moveable upon the tarsal cartilage than they were at an earlier period of their existence, they ought to be removed by an operation, performed in the same way as was recommended for the removal of the adipose tumour. Of course the incision of the skin should be made in a direction parallel with the tarsal border, so that the cicatrix may be afterwards concealed by the folds of the eye-lid, and the wound healed by the first intention, which rarely occurs where the skin of the eye-lid is divided in a perpendicular manner, in reference to the tarsal border.

Watery or phlyctenular tumour of the eye-lid.

Small tumours, resembling a transparent vesicle, sometimes form at the margin of the eye-lid, and they are most commonly observed towards the inner canthus. In some instances, this appearance is produced by a dilatation of that part of the lachrymal duct situated between the punctum lachrymale and the sac; in such cases there will be a small circular transparent bag, containing a limpid fluid, which may be emptied by pressure, and which does not immediately re-appear on the removal of the compression, but remains as a small flaccid cist for some time afterwards, until refilled by a fresh accumulation of tears. However, this last-mentioned occurrence is by no means the common source of these vesicles which form at the tarsal margins; they

are often entirely new productions, and consist, as I have before explained, of a delicate transparent cist containing a pellucid fluid.

These vesicular productions constitute a slight personal blemish, and in some instances produce a good deal of uneasiness, so that the eye is kept in a constant state of irritation, and on these accounts we are often required to remove them, and this is most easily accomplished; all that is necessary being to snip them away with a fine pair of curved scissors; if they are removed in this way, and the small cavity produced by their removal be afterwards touched with a piece of lunar caustic worked to a very fine point, they are effectually cured, and do not afterwards occasion any inconvenience. I need scarcely mention that the treatment by excision is only recommended where the phlyctenular tumour arises independently of any dilation of the lachrymal duct, and that it would be exceedingly wrong to snip away the dilated portion of the lachrymal duct, which, as I have stated, sometimes resembles the disease we are now considering, for that would induce the permanent obliteration of one part of the natural channel for the passage of the tears.

Tumour of the eye-lid arising from the enlargement of a cutaneous follicle.

This variety of tumour of the eye-lid is very commonly observed, and is first noticed as a small prominence generally of a somewhat oval figure; as it increases in size, a minute pinhole aperture forms in its centre, through which a white concrete substance may be expressed. If a bristle be passed through this aperture, it enters the cist containing the concreted substance.

Many of these tumours often exist at the same time, particularly in children; there may be five or six of them in various parts of the palpebræ, and in other parts of the face. They form in the subcutaneous cellular membrane, and their cist is generally fine and delicate, possessing a very slight degree of vascularity and having scarcely any adhesions to surrounding parts, so that they admit of removal in an entire state with the utmost facility. On examining these tumours, they are found to be composed of a fine bag of a white consistent substance, not of a homogeneous texture, but slightly fibrous and granular in appearance, but evincing no traces of organization; in short they appear to be a mere secretion—the secretion of the enlarged cutaneous follicle. Sometimes the cist will be much thicker than has been just represented, but it does not usually acquire any considerable degree of density; it does not acquire that thick strong character which similar cists, in other situations, are known to possess.

If these tumours are allowed to continue, the skin will first inflame, and secondly, ulcerate; the surface of the tumour will become exposed, and will present a rough fibrous appearance, and will eventually slough.

Treatment.—These tumours are best removed from without, and I am in the habit of making an elliptical incision, so as to include the small portion of integument, in which the aperture leading to the interior of the tumour exists; and having done this, I grasp the strip of skin connected with the tumour, with a forceps, and, by the aid of gentle traction, draw it, with its cist, from its cellular nidus.

Encisted tumours of the eye-lid, not mentioned in the preceding observations.

Encisted tumours, containing a fluid of various kinds, occasionally form in the eye-lids, and they may arise at, and from, any part of them. They may exist immediately beneath the skin, and that is their more ordinary seat; they may arise within the cellular membrane, intervening between the tarsal cartilage and the orbicularis muscle; from the tarsal cartilage itself, or between it and the mucous membrane of the eye-lid; and lastly, hairs may grow from the surface of the cists, or, may be found loose in their interior, and, indeed, very curious substances have been represented as having been occasionally found in the cavity of these cists. I need not say any thing respecting the mode of distinguishing their precise seat, after the ample manner in which this part of the diagnosis of tumours of the eye-lid has been already considered, at an early part of these observations; but I am anxious to direct attention to a fact, which I have witnessed on several occasions, and which has not been mentioned by Sir Astley Cooper, in the excellent paper on "Encysted Tumours," published by that distinguished surgeon, in conjunction with Mr. Travers—I allude to the detachment of the hairs from the surface of the cist, at a certain period of their developement. In three cases in which I have recently removed a tumour situated towards the external canthus of the eye, immediately beneath the supercilium, the cist in each of them contained a small quantity of thin yellowish fluid, like a very weak solution of honey, a few hairs only remained attached to the surface of the cist, which was soft and almost flocculent, somewhat thick and of a greyish colour, and a ball of hairs, composed of an immense number of single hairs, was floating in the fluid contents of the cists. When this fact is considered in connexion with the pathological condition of the cist, to which I have just referred, that is, its greyish, thickened, and softened state, I am inclined to refer the detachment of the hairs, in such instances, to some morbid state of the internal surface of the diseased production; or, in other words, I think it very probable that the hairs found in each of these cists, which originally grew from, and were attached to, their surface, were thrown off and detached in consequence of some subsequently occurring change in the state of the cists which produced them. In other instances where hairs have been found adherent to the surface of cists, in many respects similar to those just mentioned, that surface has been of

a firmer, denser texture; it has not been by any means so loose and soft, and, I might almost say, so flocculent. How close may be the analogy between that morbid process, by means of which hairs are detached from other surfaces with which they were originally connected, and from which they naturally grew, and that existing between the diseased change occurring in a surface, not originally consituting a part of the system, I do not venture to determine.

The usual seat of such tumours, when they contain hairs, is near to the eye-brow; and I have generally found them situated towards the external canthus. The hairs they contain are generally short, and not particularly thin; they are of the same colour, and generally possess the same curve, as those constituting the eye-lashes of the individual in whom this morbid production occurs.

Now, such tumours will sometimes become adherent to the periosteum of the orbit; and I mention this fact, particularly, because it has appeared to me, from the opportunity of witnessing a vast number of such cases, that this adhesion very frequently results from the continuance and increase of the tumour; when they are removed soon after their formation, such adhesions will be rarely found to exist, but they are equally rarely absent when their removal is delayed, so that the inference I have deduced, and which has been just stated, appears to be fully justified by the foregoing fact, connected with the history of their progress. Of course I am only stating the general rule, for it cannot be denied that, in some such cases, the cists of these tumours arise primarily from, or, at least, are from the first attached to, the orbital periosteum.

Operation.—I shall presume that the usual means of curing a tumour of this description, without having recourse to a surgical operation, have been tried; that they have been fruitlessly employed; and that its removal by an operation is deemed necessary. Some surgeons prefer to puncture the cist, and discharge its contents; others again lay open the cist throughout its entire extent; but as these measures generally fail to effect a radical cure, as they are merely palliative in their principle, it is in very many cases requisite to have recourse to the operation of extirpation of the cist, a measure I always adopt at once, without incurring the risque of inflaming the cist, and, consequently, inducing the rapid growth of the tumour by puncturing or lacerating it; for, it will be remembered, that such cists do not readily take on the adhesive process when inflamed, but generally lead to an increase of that fluid which they previously contained.

When they arise anterior to the tarsal cartilage, to which they have formed no adhesions, they are most easily removed by an incision in the integument of the eye-lids, which should also penetrate the cist and discharge its contents; the sides of the incision should be then pressed together, and the cist everted, (as advised by Sir A. Cooper,) and gradually withdrawn, which

may generally be accomplished without any further dissection. Some surgeons prefer to remove them in an entire state; but, even admitting that this can be effected (which indeed very seldom happens) the operation is much more tedious, much more painful, and, in nine cases out of ten, the cist will be punctured, and the operator will be finally compelled to remove the tumour as though an incision had been at once made into the cist. When these tumours arise from the tarsal cartilage, the posterior part of the cist is so intimately connected with that cartilage, that it cannot be dissected from it, without making an opening in, or otherwise injuring it; and I may state, with the utmost confidence, that if the small portion of the cist so attached, be left behind, it will not give rise to any fresh accumulation of fluid, and the parts will heal, just as though it had been most perfectly and completely removed. However, the very slight risk which exists of the re-production of the tumour, is not to be compared to the serious injury which may follow the formation of a large and irregular aperture in the tarsal cartilage, so generally made, during any persevering attempt to dissect the posterior part of a cist which has become adherent to it, from its surface.

Before concluding this very brief history of the different tumours which are occasionally found, in various parts of the palpebræ, I am desirous of directing attention to the various situations, (as regards the respective parts of the eye-lid,) in which they occur, for it is obvious that, in respect to treatment, this is a matter of the greatest importance. Let me, then, repeat that—1, there are tumours which form *upon* the skin; 2, others which implicate, and are more or less blended with that part; 3, others, again, which form between it and the orbicularis muscle; 4, tumours which are situated between the tarsal cartilage, and the orbicularis muscle; 5, tumours which arise from the tarsal cartilage itself, either upon its cutaneous or its mucous aspect; and 6, tumours which are situated between the mucous membrane and the tarsal cartilage.

Unless these facts are borne in mind, and unless the distinction in the respective seat of tumours of the lids be pretty accurately drawn, the treatment of them will be neither adapted with precision nor judgment; and we shall still hear it gravely asked, whether tumours of the palpebræ should be removed from its external or its internal surface? an enquiry which, when made in these very general terms, involves great confusion upon, or ignorance of, the subject to which it relates.

ARTICLE X.

Medical Reports.

BY CHARLES HASTINGS, M. D., WORCESTER.

Diabetes.

In the 6th and 8th numbers of this Journal, Dr. Malden has been at great pains to collect together the opinions of ancient and modern writers, upon that very singular disease, Diabetes; and after having taken an extensive survey of their opinions, and added to the facts recorded by them, some interesting cases that had occurred in his own practice, he comes to the three following conclusion :—1st. That there is in this disease a defective animalization of vegetable ingesta, with augmented hunger and thirst. 2nd. That there is most rapid absorption of fluid from the primæ viæ. 3rd. That as long as the urine is saccharine, the blood differs from its natural state in having turbid serum, and long resisting the putrefactive process: and lastly, that in all the well authenticated cases of confirmed cures, both animal diet and opium were used.*

Having called the reader's attention to the above instructive papers relative to the history of this malady, I feel relieved from the necessity of entering into any general account of the writings of authors upon it, which I might otherwise have done, previous to narrating the history of some cases of this nature that have fallen under my observation.

The constitutional and other affections usually accompanying a saccharine state of the urine, are summarily enumerated by Mr. Watt as follows :—

"The appetite is usually better than in health. Uneasiness in the stomach after meals; thirst urgent; the mouth dry and parched; tongue white and foul, sometimes unnaturally clean and red; tough disagreeable mucus in the throat; depraved taste; skin dry and unperspirable; considerable emaciation; weariness and aversion to exercise; loss of strength; pain and weakness in the region of the kidneys; irregular, generally costive, state of the bowels; some degree of inflammation and uneasiness about the external orifice of the urethra; loss of virility; chilly state of the body: cold feet; a tendency to œdema; heat and uneasiness in the stomach and bowels; acid eructations; flatulence; eyes muddy and painful; indistinct vision; vertigo; head-ache; dyspnœa on the least exertion; gums spongy and ulcerated; weight and tenderness about the præcordia; a tendency to sigh; listlessness; mind weak and peevish; spirits greatly exhausted."†

* Midland Medical and Surgical Reporter, No. viii. p. 110.

† Watt on Diabetes, p. 196.

Notwithstanding the laborious exertions of the many eminent pathologists who have investigated this disease, we are still very much in the dark as to the state of the animal system on which it depends. Dr. Prout, one of the latest inquirers into the affections of the urinary organs, and whose long and almost exclusive attention to this class of diseases, claims for his opinions every possible respect, says, "The proximate cause of diabetes is exceedingly obscure. A great variety of opinions has, indeed, been advanced on this point, but as the subject has hitherto received no satisfactory elucidation from *post-mortem*, or other enquiries, and is actually at this moment not understood, I do not think it necessary to enter upon it here. I have often thought, however, that there is nothing more wonderful about this, than in any other animal process, and that if we understood how the animal economy forms fat, or the liver bile, we should be at no loss to understand how the kidnies sometimes form sugar."*

In order to place before the reader, in a striking manner, the great diversity in the appearances presented in the examination after death, in cases of diabetes, I will relate two instances of this nature that fell under my own observation.

Case 1.—Diabetes succeeding Chronic Hepatitis.—Death.

A middle-aged man, a blacksmith, after having for a long time been subject to dyspeptic symptoms, became affected with the ordinary signs of diabetes, which shortly reduced him exceedingly, and caused his death.

On examination of the cavity of the chest, I found the organs contained in it perfectly healthy.

In the abdomen the liver was found enlarged, and its peritoneal coat was thickened. The texture of the organ was paler than natural, and it had somewhat of that nutmeg appearance so frequently observed in affections of this organ. The gall-bladder was healthy, and contained a fair proportion of bile.

The stomach was very large, but I could not detect any appearance of disease in its mucous membrane. The peritoneum covering the spleen, was thickened from chronic inflammation, and the substance of the organ was particularly soft. The pancreas was healthy. There was nothing remarkable in the state of the small or large intestines.

Kidneys.—The capsules in which the kidneys were contained, were not diseased. Each of the kidneys was larger than usual, but there was no particular fulness of the blood-vessels of these organs, and the general structure of them did not differ from that which is usually observed. The urinary bladder was not at all diseased.

* An inquiry into the nature and treatment of Diabetes, Calculus, and other affections of the Urinary Organs; By W. Prout, M. D., F. R. S.

Case II.—Diabetes terminating fatally. Diseased lungs.

I attended a woman, aged 35, for some time, with diabetes. She passed from eighteen to twenty pints of urine daily, for some weeks. It was saccharine, and, on two or three occasions, yielded a large quantity of saccharine matter on evaporation. The specific gravity of the urine was 1.040. After the disease had continued some time, she was very much emaciated, and a cough, with tightness of breathing, came on. The young woman sank into a hectic state and died.

On examination, the lungs and pleura were found much diseased.

When the thorax was opened, the lungs were observed to be strongly adhering to the ribs : a false membrane, of the thickness of common leather, was the connecting medium between the costal and pulmonary pleura. In the posterior parts of each of the sacs of the pleura, there was a sero-purulent fluid collected, to the amount of about half a pint, in each cavity.

In the substance of the lungs, there were deposited a very considerable number of small white tubercles, and in some parts these had coalesced and formed masses. None of the tubercles had softened. The cellular structure of the lungs, surrounding the tubercles, was much thickened and inflamed, and in many parts hepatized. The mucous membrane lining the bronchia, was inflamed, and the bronchial cells were pretty generally clogged up by a collection of purulent mucus.

The heart was healthy.

Abdomen.—The liver was not diseased. The stomach was rather large; its mucous membrane was more red than natural, but it was not otherwise diseased.

The spleen and pancreas were natural, as were also the intestines.

The kidneys were rather larger and more vascular than natural; but, by the most careful examination, there did not appear to be any other circumstance connected with them, worthy of remark.

In the two cases above related, the organic lesions to which the patients ultimately succumbed, were of a dissimilar nature; but, it is worthy of remark, that in each case, the principal disorganization was observed in organs which are intimately connected with the nutrition of the body. There is nothing, however, peculiar to the changes of structure in the liver and lungs, and kidneys, in these instances, which enables us to form a connecting link between them and the sugar-making process, in which the kidneys were engaged, so long previous to death. This, indeed, does not appear to be a matter upon which the researches of the morbid anatomist seem likely to lead to any very satisfactory results. The progress of animal chemistry appears much more likely to elucidate this hitherto obscure part of the subject.

The following case I think worthy of being placed upon record, owing to its peculiar severity.

Case III.—Diabetes, with extreme Diuresis.

Thos. J. aged 33, of dark complexion, was received into the Worcester Infirmary on the 27th of March, 1814. He makes about 20 quarts of urine in the course of 24 hours, which has latterly been devoid of urinous smell, and quite limpid and colourless. He has been in the habit of drinking about 16 quarts of fluid in the same space ef time. He complains much of thirst; the skin is hot and dry, and the tongue is furred; pulse 86; the face does not flush. He has a dejected aspect. Last night, for the first time, he vomited; he eats voraciously, and feels full after doing so; and when the stomach is at all empty, he complains of pain, and fluttering of the heart. A deep inspiration occasions pain at the pit of the stomach, and there is some tenderness there, and in the right hypochondrium. When he is in bed, he has a constant pain in the back of the head, and an aching throughout his limbs. The bowels are generally costive, and the stools are very offensive. There is tenderness over each kidney, but he has no pain there unless he has been lying on his back for some time. At night he is much troubled by cramps in the legs. His breath is very offensive, and the gums are spongy, and he has always a coppery taste in the mouth.

The disease has existed upwards of six months. He was at first taken ill with thirst and aching of the limbs. For twelve months previous to his illness, he has been reduced to great poverty, and has been very scantily supplied with food. He says that his appetite is now never satiated. He has emaciated since the illness began.

He was directed to take fifteen grains of Dover's powder every night, and ten grains of cathartic extract every morning. To live entirely upon meat and broths, to the exclusion of vegetables and pastry. To drink water.

29th.—He has coughed much, and complains of pain in the epigastrium. Pulse 80; skin cool, but dry and harsh; tongue clean; bowels open; appetite not so voracious; pain in the loins continues. He has a great dislike to meat, on which account he is allowed half a pound of bread in the day.

He continued his medicines, and was directed to lose ten ounces of blood from the arm. In this case, so great was the man's dislike to animal food, that it was impossible to prevent him from having vegetable matter. On a more rigid adherence to animal food being insisted upon, he took occasion to abscond on the 5th of April, saying that he would rather die than be confined to animal food. During his stay in the infirmary, the specific gravity of the urine was once taken, and it was 1.045.

On two occasions the urine was evaporated, and from a pint of urine on the 29th of March, a saccharine residuum of five drachms and twenty-three grains was procured; and on the 4th

of April, from the same quantity of urine, six drachms of a similar extract were obtained by evaporation. The following is the table of the fluids taken and the urine passed:—

DATE.	*Fluids taken.* QUARTS.	*Urine passed.* QUARTS.
March 29,	14	15
30,	13	14
31,	14	12
April 1,	14	16
3,	16	18
4,	18	20
5,	20	22

Observations.—The obstacle to the cure in this case, was the impossibility of persuading the man to comply with the necessary diet. No earthly power could induce him to abstain from vegetable matter, although he was made to understand that his life depended upon his diet being confined to animal matter, so that the plan of treatment did not have a fair trial. But the excessive secretion of urine, in this case, was to a degree that is seldom observed. Thirty pints of urine, in the course of twenty-four hours, is the largest quantity I ever observed to continue to be discharged for many days together, in any other instance; and Dr. Prout mentions this as the extreme quantity that had fallen within his observation. He says, "A saccharine condition of the urine is the characteristic symptom of diabetes; but another most striking and constant symptom is diuresis, or an increased secretion of that fluid; and sometimes the quantity of urine voided is enormous. Thus cases are on record in which thirty pints have been discharged every twenty-four hours, for weeks and even months together. In such cases, the quantity of urine voided has been said to be more than double the whole ingesta, a circumstance which physiologists have puzzled themselves a good deal to explain. I believe, however, that in the best authenticated cases, this enormous difference between the quantity of ingesta and urine, has not been observed."*

But, in the case I have just recorded, forty pints of urine were passed every twenty-four hours; in each pint of which, six drachms of saccharine matter were contained, which would amount to two pounds and a half every twenty-four hours, or twenty pounds during the eight days he remained in the infirmary!

Case iv.—Diabetes, ending favourably.

E. G. aged 60, was received an in-patient of the Worcester infirmary, on the 9th of January, 1830. The report that was then taken of him states, he complains of extreme thirst, and of his urine being copious and sweet; also of giddiness and pain in the head; his eyes are painful, and run with water; skin dry and rough; tongue dry and red; pulse 94; bowels regular. He states that, for twelve months past, since an attack of fever

* Dr. Prout on Diabetes, p. 63

he then experienced, his urine has been more copious than formerly. He is accustomed to hard work and poor living, vegetables being the chief nourishment that he has taken. He was directed to have a strict diet of animal food, and to take one grain of opium three times a day.

On the 12th, he complained of stitching pain in the epigastrium and right hypochondrium. Tongue very dry; bowels much purged. One quart of urine was evaporated, from which, two ounces and six drachms of sweet extract were obtained. He continued the opium.

On the 13th, he was less purged and altogether better, and continued to improve in every respect until the 18th, when the opium was omitted. But he was obliged, in two days, to return to the use of them again, for the thirst and other unpleasant symptoms recurred. They were again mitigated by giving him opium and keeping the bowels open, (which, at this time, were inclined to be costive,) by a senna mixture. There was not, however, notwithstanding the general improvement of the health, any material alteration in the character of the urine, for the same portion of it as before, was at this time evaporated, and afforded the same quantity of sweet extract. He still persevered in the use of the opium and the animal diet, and his general health improved fast; so much, indeed, that on the 10th of February, he was enabled to be out-patient, taking with him the opium pills, and being directed to live as much as possible upon animal food. The quantity of solid extract in the urine had, at this time, much diminished, as, by evaporation of a quart of it, only one ounce of solid residuum was obtained, and it was not so sweet as before.

He returned to the infirmary in a month after he was discharged, very much improved in health and strength. He had quite lost the giddiness of the head, and looked fat. He had lived pretty much upon animal food, and had continued the opium twice a day. It is worthy of remark that, after he was made an out-patient, a general cutaneous eruption appeared, and he thought that he improved much faster after that took place. Half a pint of urine was evaporated, and left only one drachm of solid extract, which was not saccharine. The following is a statement of the fluids taken and the urine passed during his residence at the infirmary:

	Fluids taken.		*Urine passed.*	
DATE.	QTS.	PTS.	QTS.	PTS.
January 12,	2	0	3	0
13,	2	1½	2	0
14,	2	1½	2	0
15,	2	0½	2	1
16,	2	0½	1	1½
18,	2	1	2	1
21,	2	1	2	1½
26,	1	1½	2	0½
27,	2	0½	2	0
28,	2	0½	1	1½
29,	2	0½	2	1½

		Fluids taken.			*Urine passed.*	
		QTS.	PTS.		QTS.	PTS.
January	31,	2	0½		2	1½
February	1,	2	1		3	0
	2,	2	0½		2	1
	3,	2	1		3	0
	4,	2	0½		2	1
	6,	2	1		2	1
	8,	2	1		2	1
	10,	2	1		2	1

Case v.—Diabetes, terminating successfully.

May 28, 1831.—B. Jones, æt. 30, was admitted as an in-patient of the Worcester Infirmary, labouring under the following symptoms, which first attacked him about three months since, and have been increasing in severity up to the present time. Has swelling of the superior part of the abdominal cavity, more especially in the right hypochondriac region, accompanied by great pain. The bowels are costive, and the stools pale. Considerable pain in the renal regions. Tongue clean, of rather a glareous appearance; urgent thirst; countenance sallow; inclined to sleep long and often; increased cardiac action, aggravated by distension of the bladder when not able to void his urine, to do which he has very frequent calls, more particularly during the day. He was first attacked with almost inability to void his urine, which was scanty and high coloured, until about a fortnight after the commencement of his illness, when his urine first became very much increased in quantity beyond the natural measure, and latterly, he says, he voids about half a gallon during the night.

A pint of urine, on evaporation, yielded half an ounce of sweet extract.

To relieve the pain in the right side, eight ounces of blood were abstracted, by cupping him, and as the biliary secretion was evidently (from the state of his stools, which, though snfficient in quantity, and discharged at natural periods, were of a pale colour) very deficient, he was ordered to take five grains of the pil. hydr. every night, and a dose of Epsom salts occasionally in the morning, to prevent his bowels being sluggish. His diet was desired to be strictly of animal matter.

On June 1st, he complained of pain in the lumbar region, for which he was cupped, with great relief.

On the third, he said he was free from pain, and he was ordered to go on with his medicines.

A pint of urine was evaporated, and about two drachms of a highly saltish, slightly saccharine, residuum was procured.

On the 4th, he was considered so well as to be fit to leave the infirmary.

He returned to the infirmary three weeks afterwards, in good health, and the urine was not at all saccharine, which was proved by evaporation.

The following are the daily quantities of the fluids he drank, and the urine secreted:

	Drinks.		*Urine.*	
DATE.	QTS.	PTS.	QTS.	PTS.
May 30,	1	0	2	1
31,	1	0	2	1
June 1,	1	0	2	0
2,	1	0	2	1
3,	1	0	2	0
4,	2	0	2	1

Observations.—This case is remarkable for the readiness with which the diabetic symptoms gave way. We must be led to infer, from such a case as the above, that a comparatively slight derangement of the system will sometimes suffice to induce the kidneys to take on the sugar-making action. In this case it would appear that the derangement of the functions of the liver was the first link in the chain of diseased actions which led to this morbid urinary secretion; for no sooner was the liver, by the remedies employed, brought into a healthy condition, than the urinary functions became natural. No opium was given in this case.

It is deserving of much attention, that, in each of the foregoing cases, the patients attributed the attack to impoverished diet. This, together with the ready manner in which the disease yielded to a diet of animal food, and to very simple treatment, leads one naturally to ask whether, in these cases, the disease was not almost entirely confined to the fluids of the body, which were in a morbid condition, owing to the supply of food being such as not to afford healthy chyle? This view very much simplifies our notions of the nature of the disease, as it leads us to think that the extensive disorganizations of the chest and abdomen, which have been so repeatedly observed in the bodies of those who have died of diabetes, is an accidental combination with diabetes, and by no means necessarily existing, or forming a part of that disease. I confess I very much lean to this opinion; and am induced to think that diabetes, in itself, is not so untractable a disease as we have been taught to believe; but it is like dropsy, so frequently connected with, and produced by, extensive organic lesion, that the patient frequently sinks, not so much from the diabetes, as from the mischief resulting, as the effect of the previous disease of the vital organs. I shall relate a case which confirms this view of the subject, where diabetes was combined, in a child, with tabes mesenterica.

Case vi.—Diabetes connected with Tabes Mesenterica.

On the 20th of June, 1829, Ann Everiss, aged 12, was received into the Worcester infirmary. She complained of great thirst, with ravenous appetite; occasional head-ach, and sometimes delirium; slight cough and mucous expectoration; abdomen much enlarged and very tense, but not tender; there was no fluctuation. Pain in the hepatic region, and some degree of tenderness in that part. Bowels, costive; tongue, dry and red at the edges; pulse, 90, very weak; skin, dry and rough;

temperature 98°. She had been ill eighteen months, and was first attacked with sudden giddiness in the head, followed by pain in the hepatic region, and abdomen, generally. She had been under medical treatment for nearly a year previous to her admission into the infirmary.

She was directed to live as much as possible upon animal food; to take a mixture of carbonate of soda, infusion of rhubarb and peppermint-water, three times a day; and to have the ointment of hydriodate of potash rubbed over the abdomen, night and morning.

On the 25th, there was no alteration in the symptoms. The quantity of urine passed, and of fluids taken, was measured daily, and found to average, of urine, twenty-two pints and a half; and of drink, twelve pints.

One quart of the urine was evaporated, and afforded a sweet residuum amounting to two ounces in weight.

On the 28th, she was much purged. The abdomen was diminished in size, and not so tense; appetite still voracious; tongue not so red. The report says, "She devours nearly as much as three patients.

The medicines were continued, and she was ordered four meat allowances, one pint of milk, and three allowances of bread daily.

On the 5th of July, the appetite was not so great; the abdomen was softer and smaller. She only took one allowance of bread, and three of meat. Tongue not so red.

The residuum from a quart of urine was sweet; it weighed one ounce and three quarters. Continued the ointment and mixture.

On the 8th, not quite so well. She had lime-water to drink, and continued the medicines.

On the 12th, the appetite again increased.

On the 17, her appetite was much increased, and the abdomen was larger. By mistake the nurse had omitted to rub in the ointment since the 6th instant. The ointment and the mixture were continued. We found it almost impossible to restrain the patient to animal food; and, on the 25th, she managed clandestinely to get a good meal of potatoes, and other improper articles of diet, the consequence of which was, that, on the 26th, severe purging came on, which continued some days; on this account, on the 27th, the mixture was omitted, and a grain of opium directed to be given every four hours. The urine, which at this time had again increased, after having been considerably diminished, was found to be more saccharine than even at first, for a quart of urine, at this time, yielded a sweet residuum in weight two ounces and a half.

The urine diminished in quantity again, in a day or two, after the opium was exhibited; but the diarrhœa continued, and emaciation was progressive. The tongue was again red and dry. There was great thirst, and the skin was harsh. This being

the case, on the 8th of August, the dose of opium was increased to two grains every four hours; and the ointment was continued.

This, as the table underneath will shew, was followed by a decrease of the urinary secretion; but the purging did not subside, although chalk mixture was added to the opium; and, on the 27th of August, the dose of opium was increased to three grains. Notwithstanding, therefore, the improvement in the diabetic symptoms, she grew thinner and weaker; and her friends, anxious to have her at home, removed her from the infirmary; and we had no opportunity of investigating the further progress of the case. On the day she left the infirmary, one quart of urine was evaporated, which afforded a residuum in weight half an ounce, and less saccharine than before; so that there was a very essential improvement in the diabetic symptoms, for not only was the urine much less abundant, but much less saccharine.

DATE.	*Ingesta.* PTS.	*Egesta.* PTS.
June 26,	16½	20½
27,	21	23½
28,	14½	24
30,	13	13
July 1,	16½	17
2,	7	5
3,	9	9
4,	8	9
5,	10½	10
6,	10½	9
7,	16	18
8,	19	19
10,	14½	16½
12,	13	17
16,	13	16
17,	18	26
18,	18	22
19,	18	23
25,	19	26

DATE.	*Ingesta.* PTS.	*Egesta.* PTS.
July 28,	19	25
Aug. 1,	13	13
3,	14	13
6,	9	13
7,	17	17
8,	18	16
9,	12½	12½
10,	4½	5½
11,	8	8
12,	13	13
15,	5	8½
18,	9	11½
20,	9	14
27,	11	15
30,	8	8
Sept. 2,	6	6
8,	4	4½
12,	2	2

Observations.—In this instance, the treatment was directed to two principal objects,—the removal of the abdominal tension, and the relief of the diabetic symptoms. It would have been desirable to have ascertained, which of these morbid affections preceded the other; but we could not elicit, from the patient, any direct evidence on this subject. The hydriodate of potash seemed to have a happy effect in speedily diminishing the morbid enlargement of the abdomen, which I attributed to chronic disease of the mesenteric glands. The soda and rhubarb also, together with animal food, were likely to improve the state of the digestive organs, and thus to cause a more healthy chyle to pass through the lacteals. By this means, not only was there a rational hope of relieving the diseased mesentery, but the diabetic symptoms were likely to give way. Success attended the plan in its commencement; and, as long as it was steadily pursued, the enlargement of the abdomen diminished—the quantity

of urine passed, was decreased, and the proportion between it and the fluid taken, was more healthy—the saccharine residuum became less—and every thing seemed to indicate an improved state of the functions of the aliamentary mucous membrane. All this too was effected without having recourse to opium. The hydriodate of potash and the soda mixture, with animal food, had alone been used. The child, however, became impatient of the restraint imposed upon her in respect of diet, and clandestinely managed to evade it. The consequence of this was, that the aliamentary functions were soon much disturbed. An intractable diarrhœa supervened, which was coincident with a recurrence of diuresis, and a more saccharine state of the urine. Opium soon checked the inordinate secretion from the kidneys; and by six weeks' perseverance in the use of opium, the diabetes was nearly cured. The diarrhœa and emaciation, however, went on notwithstanding the abatement of the inordinate secretion from the kidneys; and there was but too much reason to fear, when she left the infirmary, that a confirmed mesenteric consumption would, at no distant day, hurry her to the grave. As far then as respected the diabetic symptoms, the case ended well, but the mesenteric affection was not ultimately under controul.

Case II.—Diabetes of twelve years continuance.

William Goodman, aged 40, was received into the Worcester infirmary, the 15th of January, 1820. He complained much of uneasiness and weight at the epigastrium; and occasional sickness. Appetite keen; constant cephalalgia; thirst urgent; tongue of a milky white appearance; skin dry; pulse 108; urine copious and clear, rather of a high colour; pain in the loins, particularly in the region of the left kidney. He stated that he had been affected with pain in the loins, and had passed more than his usual quantity of urine for two years previous to his application at the infirmary. On his first being admitted, he drank six pints of fluid, and passed, daily, eight pints of urine. On evaporation, a quart of the urine yielded one ounce of saccharine residuum.

He remained in the infirmary, on this occasion, six weeks; during which time his diet was principally, though not wholly, of animal food. He was cupped three times on the loins, and used the warm bath every night. He took calomel purges every other night for three weeks; and afterwards, a mixture of soda, rhubarb, and calumba. The plan succeeded very well: the urine decreased in quantity; the pain in the loins subsided; the dyspeptic symptoms left him; and he left the infirmary, much improved in health, on the 1st of March. He then returned to his trade, as a shoe-maker; and soon found his dyspeptic symptoms return: and they were shortly followed by diuresis; so that, on the 19th of May, he again presented himself at the infirmary for admission, labouring under pretty much the same

symptoms as before, but in a slighter degree. The urine was again evaporated, and afforded the same saccharine residuum as before. He now remained in the infirmary six months; during which time he was confined to meat diet; he was bled frequently, and took alterative doses of calomel, together with tonics. The urine again became natural in quantity, and saline in quality; he went out of the infirmary, apparently in good health, on the 10th of August. He now enjoyed a considerable respite, for he did not again return to the infirmary until the December of the following year, 1821. His symptoms were then more distressing than on either of the former occasions. He had constant cephalalgia—nausea, and frequent vomiting—urgent pain in the loins. He drank, during the twenty-four hours, ten pints of water, and passed 15 pints of urine; which afforded, on evaporation, a saccharine residuum. Great thirst; skin dry; tongue white.

The treatment was, bleeding, leeches, and cupping to the loins; meat diet; alterative doses of calomel, and bitters. The plan again relieved him, and he was dismissed, in tolerable health, on the 27th of March, 1822.

He continued pretty well till the 19th of April, in the succeeding year, when he was again admitted, complaining very much of dyspeptic symptoms, and most grievously of pain in the region of the left kidney. The quantity of urine now voided daily was twelve pints, and the quantity of drink taken ten pints. The urine was again sweet, and yielded an abundant saccharine residuum on evaporation.

He was again placed upon pretty much the same plan as before, being confined pretty much to a meat diet, and having blood taken from his loins frequently. He took also, for some time, a grain of calomel every night, and a mixture of infusion of calumba and tincture of orange peel, twice a day. He remained on the books, as an out-patient, till September, 1824, when he was again admitted into the infirmary, labouring under much the same symptoms, which yielded to a similar plan; and so much was he relieved on this occasion, that we did not see anything of him until the 3rd of February, 1827, when he presented himself for admission, in a very emaciated state, being affected with the same train of dyspeptic symptoms, and the same distressing pain in the region of the left kidney.

Meat diet—bleeding, local and general—calomel and opium, one grain of each, every night, again relieved him. The urine, when he was admitted on the 3rd of February, amounted to thirteen pints daily, and afforded a copious saccharine residuum on evaporation. When he was discharged, on the 23rd of the same month, it had diminished to five pints, and did not afford a saccharine residuum.

He remained in tolerable health until December, in the following year, and had prosecuted his occupation as a shoe-maker; but he returned to the infirmary in December, 1828, and went through the same discipline as before, with the same success,

for he was discharged in January, 1829, in a much better state; but his immunity from suffering was very short, for he became a patient on the 2nd of May, suffering very much in the old way, but more especially with pain, which was really quite excruciating, in the left renal region. The character of the urine had now considerably altered, for although he made twelve pints of limpid urine in the course of the twenty-four hours, and drank nine pints and a half of water, the urine was not at all sweet, and afforded only two scruples of solid residuum, having the characters of urea, from one quart.

He now took two grains of calomel and two grains of opium, every night, and had a bitter mixture three times a day. Two caustics were made in the loins, and a dozen leeches were repeatedly applied to the loins. From this treatment, it was not long before he experienced relief. We thought it right, however, to keep him for some months in the infirmary, in order that the plan might be persevered in, a sufficient length of time, and he was not discharged until the 6th of August, when he really appeared to have recovered, and to be tolerably strong. From the above time until the present, January, 1832, he has been, occasionally, a patient of the infirmary, and has, during the whole of that period, suffered from pain in the left renal region, but the diabetic symptoms have been mitigated. He now takes two drachms of Batley's sedative, twice a day, with some sweet spirits of nitre and barley water. He makes about eight pints of urine in twenty-four hours, and drinks six pints. S. gravity of urine, 1.046. One pint of urine afforded, on evaporation, two scruples and a half of saccharine residuum.

Observations.—The extraordinary feature in the above case, is the period to which life has been prolonged since the first attack of diabetes, and the frequency of the success of the remedies that have been administered to relieve it. If the end and aim of medicine be to allay pain, and resist the tendency to death, then it has, in this instance, in a great degree, answered the purpose of its administration. But, it may be fairly asked, to what must the success of the treatment be attributed? How is it that diabetes has, in this case, been so long relieved, whereas the usual course of this disease is to a far more rapid termination? This question, I think, may receive an answer, by looking at the state of the system upon which diabetes here depended. The disease, I fancy, under which Goodman has laboured, has been an aggravated form of dyspepsia, together with chronic nephritis, and unconnected with any serious alteration of structure in the organs, that are subservient to the nutrition of the body. Now, in the majority of the cases of diabetes, it would appear that the contrary to this happens, for serious disorganization of some important organ or organs, concerned in nutrition, is usually observed in connexion with diabetes. This it is, that so often ensures an early grave to the diabetic. If, for example, there be serious disease in the lungs, producing or accompanying

diabetes, how can we expect to save the patient, unless we can cure the affection of this vital organ? The same thing may be said of organic disease of the liver, or disease of the mesentery, in combination with diabetes. It is true that, in these cases, we can still cure the diabetes; but what signifies that, the patient must die of the serious lesion that has taken place in the vital organ. From this it would appear, that diabetes is not in itself so fatal as we are led to apprehend. The contingencies connected with it, are what cause the disease so often to end in death. From this it would seem, that the great secret in treating diabetes, is to amend the general health. The regimen and diet that have been found peculiarly appropriate to prevent the formation of sugar by the kidneys, is applicable to all cases of this nature; but the general constitutional treatment should be directed to the relief of any lesion that may exist, or be disposed to arise, in any of the important organs of the body; and in its simplest form, where diabetes depends upon mere functional derangement of the digestive organs, it is clear that its causes must be as various as the different kinds of dyspepsia, and its treatment equally so.

Query.—Will not this account for complete cures by opium, or without it, since it is well known that there are forms of dyspepsia in which opium is contra-indicated, and others which cannot be cured without it?

ARTICLE XI.

The Cholera at Sunderland.

The attention of every member of the medical profession, is so engrossed by the consideration of the probable extension of the epidemic now raging in the North of England, and which seems likely to spread over every part of our Island, that the Editors are anxious to collect intelligence on this subject. The following letter from Dr. Brown, of Sunderland, though a private communication, and never intended by its learned Author to meet the eye of the public, contains so much valuable practical information, with respect to the treatment of the epidemic, and the general public measures necessary to be adopted in any community in which it may appear, that the Editors feel assured they will be considered as having conferred a great benefit upon their readers, by obtaining Dr. Brown's sanction for its insertion in the Midland Reporter.

Letter of Dr. Brown, of Sunderland, to Dr. Hastings, of Worcester.

Bishopwearmouth, December 16.

Dear Sir,—The bustle in which I am kept by this disease, and my ordinary pursuits conjointly, must be my apology for the delay that has occurred in answering your very polite and intelligent letter. Receive my thanks for the information it contains

respecting the state of public health, and the nature of the diseases prevailing in your neighbourhood, which I think materially relevant to what is existing here. Should I find it advisable, am I at liberty to quote you in print? The question has reference to an article on the subject of Cholera, I am writing for the Cyclopædia of Practical Medicine.

Your questions shall be answered seriatim.

1. My opinion respecting contagion has been modified, and I find the candid avowal of an error an ample compensation for wounded self-love. So many examples of its progressive diffusion through families and establishments, in situations of which the atmosphere was impure, and the individuals predisposed, have fallen under my observation, as lead me to the opinion that it is under such circumstances diffusible from person to person. By individuals predisposed, I mean persons of constitutions broken by deficient nutriment, and all the circumstances of low and laborious life, old age, previous disease, or intemperance, for such have been (almost without exception) its victims. The examples of progressive diffusion which have struck my attention and influenced my opinion, have occurred in wretched dwellings, and in the workhouse of Sunderland parish. I have, *as yet*, discovered no argument or fact which gives the doctrine of importation an air of probability.

2. This is a comprehensive question. The plan of treatment will vary much according to the period of the disease at which medical aid is summoned. If, during the diarrhœal stage, (and almost all our cases have had such a stage as the precursor of the more intense symptoms, varying in duration from twenty-four hours to two or three days,) the prospect of success is great; remedies, at first, calomel and opium, with some aromatic, such as pulv. capsici, and a blister to the abdomen; the patient to be kept warm, the bowels being opened on the following day by oleum ricini: perhaps, after this, a small opiate may be required for a night or two. By this plan an immensity of mischief may be prevented; but, alas! opportunity is rarely afforded us of preventing it. If summoned at the commencement of the choleric symptoms, I would give a *mustard emetic*, and endeavour to obtain a full bleeding, and then proceed with calomel and opium, the latter in *small* quantity; dry heat; frictions to the parts affected with spasm; sinapisms or blisters to the abdomen, and moderate stimulation. If the patient is visited at the period of real collapse, and, unfortunately, he will generally be so, the mustard emetic will still be found valuable, and if the first dose (ʒss.) do not produce full vomiting, let it be repeated after the lapse of half an hour. In this stage I think bleeding highly injurious. After the emetic, I would proceed with dry heat and frictions; brandy and water in moderate quantities; sinapisms or blisters; and such stimulants as oleum terebinthinæ, in doses of a drachm, repeated every hour; carbonate of ammonia, in doses of five grains, repeated at similar intervals, &c. You will

readily understand that it is impossible to exhaust such a subject in a communication of this sort: there is no specific for the disease. When you see it, you will perceive that you have a very bad fever to contend with, and that your treatment, as in that disease, must vary with the varying circumstances of individual cases, Our mortality (for this forms a part of your second query,) has been one in three, within a very trifling fraction, of all cases that could be fairly considered as belonging to the epidemic; of 464 cases, 159 have died; but of the real blue, bad cases, I do not think that more than one-third has been saved. They are as bad as bad can be; but we have them of all sorts, from cases resembling, as I conceive, your's of "vomiting and purging, in a degree that is unusual at this time of year," to the intense form in which the patient seems death-struck from the beginning.

3. I think that a cholera hospital should be established where the disease exists, for its objects will be found in the most wretched hovels, (if such are to be found in your town,) where the requisites of fires, flannels, blankets, &c. cannot be obtained. We have a cholera hospital in *Sunderland*. The cholera patients of *Bishopwearmouth* are received into our fever-house, (which is a wing of our infirmary not communicating with the rest of the building,) and not the slightest inconvenience has resulted, or (as I conceive,) is likely to result from the arrangement, for I have seen no decided example of the communication of the disease, even from the closest and most incessant proximity, in a pure atmosphere, and still feel a degree of doubt whether the cases of apparent communication have not rather resulted from an increase of the general impurity of the atmosphere, from sickness and death, than from actual contagion. The arrangement contemplated in your seventh query, accords with that adopted here, from which no inconvenience has resulted.

4. We have no hired nurses to attend the poor in their own dwellings; but trust to the humanity of neighbours, and have found occasion to complain rather of an exuberance, than of a deficiency of attendants.

5. The medical men in charge of the Cholera Hospital, (a Government establishment) are, I believe, paid by Government.

6. Our Board of Health consists of the Government Commissioner, the senior Physician, (Dr. Clanny) two Magistrates, and the senior Clergyman of each of the parishes of Bishopwearmouth, Monkwearmouth, and Sunderland. Our first Board consisted of nearly 200 persons, but, of course, it did not work well; in my opinion, the fewer members the better.

7. There would be no risk to paupers, if one wing of a building were fitted up, &c. as already intimated under No. 3.

8. The dead are ordered to be buried in twenty-four hours, and the bodies are not taken into the church.

9. The disease has appeared in Shields, 7 miles North from here; Newcastle, 12 miles N. W.; Pensher, 6 miles W.; Hough-

ton, 6 miles S. W.; Seaham Harbour, 7 miles S. These are all sea-port or mining places. The interjacent agricultural villages, which are numerous, and have incessant and unrestricted intercourse with us, are entirely exempt. Bishopwearmouth, whence I now write, containing 14,000 souls, and so perfectly continuous with Sunderland, that I, in many points, do not know the boundaries of the parishes, is, and has been, *almost* exempt from the disease: detached cases have appeared, but it has never spread. It stands higher than Sunderland, and contains fewer of the labouring class.

I believe I have now attended to every point adverted to in your letter. Mine is a scrawled, interlined concern; but, hurried as I am, I have been very negligent of the manner in which I have conveyed to you the information you so pleasingly requested.

If you require any further information, apply without hesitation; but I cannot promise it by return of post.

Your's, my dear Sir,
Very faithfully,
J. BROWN.

ARTICLE XII.

The Report of the Worcester Board of Health, touching the measures to be taken for the prevention of Cholera.

As it is probable that the investigation of the predisposing causes of disease in particular localities, may be calculated to throw light upon the circumstances which may influence Epidemic disease at the present crisis; the Editors conceive the following Report of the Worcester Board of Health, which contains much valuable statistical information, worthy the attention of all those who are interested in protecting our population from the ravages of disease.

At a Meeting of the Inhabitants of Worcester, holden at the Guildhall, on Thursday, Nov. 17th, certain resolutions were submitted by the Board of Health, as constituted by the City Authorities, under an order from the Privy Council, and being severally moved and seconded, were adopted by the meeting.

In virtue of one of these resolutions, Parochial Committees were appointed to inspect and report upon the general state of the town, as respected nuisances, injurious to the public health, the comforts of the poor, and such other subjects as might be thought necessary towards the accomplishment of the objects of the Board. The Board of Health beg leave to submit to their fellow citizens, the results of this inspection, together with such other of their proceedings as they deem to be of interest to the public at large.

The nuisances injurious to the public health, found by the parochial committees, in their visits of inspection through the several parishes, were such as it is impossible to convey an adequate idea of, to those who have not personally examined into them. The reports received by the Board of Health, bear ample testimony to the diligence and closeness with which these committees have performed their arduous and extremely unpleasant duties; at the

same time that they have brought to light the existence of an accumulation of filth, of all descriptions, in almost every part of the town.

The nuisances chiefly complained of as offensive and injurious, are privies and mixens, dirt heaps of various descriptions, cess-pools, drains, ditches and stagnant water, pig-sties, and the dirty state of the interior of the houses.

With respect to the privies, they were very generally found to require emptying, and, in many instances, were in an extremely offensive state. Some of them full even to the exuding of their contents through the floors, the whole building, seat, floor, and even outside the door, being made a convenience of. Those belonging to Boyce and Griffiths's buildings, in Merrivale; the building at the corner of Moor-street; Crown Court, Clap Gate; the Waggon and Horses, in Angel-street; St. Andrew's Square, and some in the Bull Entry, under the very walls of Birdport Chapel, may be especially noticed as being peculiarly offensive.

Some of the mixens and dirt-heaps were found in a very bad state, and are considered to be exceedingly injurious, in consequence of the admixture of decaying vegetable matters, and the semi-fluid state in which they are kept. It is impossible to find words in which to describe the offensive state of many of this class of nuisances. The mud-pit behind the Archangel, in Fish-street; the bog-hole in St. Andrew Square; the soil heaps in Crown Court, Clap Gate; and the general state of Farley's Entry, in the Shambles, where the manure and filth of all descriptions, remains till it is perfectly alive, may be particularly referred to. The horse mixens and stable yards were much complained of by the inhabitants in their neighbourhood, and one in Bank-street was particularly pointed out.

Many of the drains and sewers in various parts of the town, have been found to be choked up. A drain belonging to the Waggon and Horses, in Angel-street, is much complained of; and the main sewer in Quay-street has been stopped, in consequence of the heavy weights drawn over the street crushing in the brick-work; of course the whole of the neighbourhood suffers. Some very offensive ditches and collections of stagnant water have been found to exist, such as the ditch at the back of the Moors; that in Withy Walk. A very bad ditch below the distillery, and at the back of Mr. Rowland's house, in St. Clement's parish; and the ground in front of Bromley's buildings, in Lowesmoor, is in a shocking state.

One of the worst nuisances, perhaps the most dangerous of all, is the number of pig-sties which have been found to exist in all quarters of the town; some few are kept tolerably clean, but by far the greater number are miserably dirty, and the stench from them is intolerable. Some were actually found under cover, and connected with the back premises, the kitchens, pantries, &c. of the houses. Those at the back of the Shambles, in Birdport and in Hylton-street, were most offensive. Fever was observed to exist in several houses in the immediate vicinity of pig-sties, and apparently deriving its origin from the effluvia arising from them.

The houses of the poor of whole streets were found to require white-washing. Many of them miserably dirty and confined, with very insufficient means of ventilation.

The parochial reports, presented to the Board, have been laid before the Commissioners for the Improvement of the City, and

submitted by them to their Surveyor, appointed for the purpose of removing such of the nuisances as come under their jurisdiction. The whitewashing has been undertaken and performed, in many instances, with praiseworthy readiness by the landlords; an example which it is hoped will be speedily followed by all. The Board are happy to have it in their power to state, that a most satisfactory report has been received by them, from the Commissioners, which they now beg leave to read.

The Board of Health have deemed it their duty to inquire, particularly, into the general state of health of the town, and have been enabled to collect, from the answers sent by the medical gentlemen, to questions circulated for the purpose, the following information:—1st. That there has been a greater prevalence of disease this year, than during the three preceding years.—2dly. That the disease has been of a peculiar character, affecting more particularly the internal parts of the chest and bowels, and attended with great debility.—3dly. That, just at the present time, there is not more illness than there has been for some months past, though it appears now to be on the increase.—4thly. That bowel complaints have been very prevalent; and that many cases of disease, not primarily affecting the stomach and bowels, have been attended with vomiting and purging.

The Board have likewise obtained, from the parochial Clergy, reports of the burials which have taken place, in their respective parishes, during this and the three preceding years. The average of these years has been calculated for each parish; and in every instance, with the exception of St. John's and St. Swithin's, there has been an excess of the present year, though the returns do not include farther than the 30th of November. The general result is, an increase of burials in the present year (of eleven months) above the average of the three preceding complete years, of $92\frac{1}{3}$; between one-fifth and one-sixth more than usual.*

* Parishes in which the number of Burials, during the year 1831, was above the average of the preceding years.

	1828.	1829.	1830.	*Average.*	1831.	*Excess.*
St. Martin's, ...	100	96	83	93	129	36
St. Peter's, ...	112	88	96	$98\frac{2}{3}$	120	$21\frac{1}{3}$
St. Nicholas', ...	46	25	37	36	50	14
St. Andrew's, ...	90	74	75	$79\frac{2}{3}$	92	$12\frac{1}{3}$
St. Michael's, ...	14	20	21	$18\frac{1}{3}$	27	$8\frac{2}{3}$
St. Clement's, ...	49	52	62	$54\frac{1}{3}$	62	$7\frac{2}{3}$
All Saints, ...	23	21	28	24	26	2
St. Helen's and St. Alban's,	38	34	31	$34\frac{1}{3}$	36	$1\frac{2}{3}$

Parishes in which the number of Burials, during the year 1831, was below the average of the three preceding years.

	1828.	1829.	1830.	*Average.*	1831.	*Dimin.*
St. John's, ...	48	47	54	$49\frac{2}{3}$	41	$8\frac{2}{3}$
St. Swithin's, ...	5	5	6	$4\frac{2}{3}$	2	$2\frac{2}{3}$

GENERAL RESULT.

	1828.	1829.	1830.	*Averaga.*	1831.	*Excess.*
Total, ...	525	460	493	$492\frac{2}{3}$	585	$92\frac{1}{3}$

In connexion with this subject the Board of Health beg to state, as their opinion, that the practice of burying in towns is inexpedient at all times, but especially during the prevalence of any epidemic or contagious disease.

Arrangements have been made for the efficient medical attendance upon the sick poor affected with cholera, the town having been divided into parochial districts, and two or more medical practitioners appointed to the care of each district, as follows:—

All Saints, ...	Mr. Morris, Mr. Greening and Mr. Hulston.
St. Andrew's, ...	Dr. Streeten and Mr. Woodward.
St. Clement's, ...	Dr. Hastings and Mr. Carden.
St. George's, Tything,	Mr. Stephenson and Mr. Carden.
St. Helen's & St. Alban's,	Dr. Nash and Mr. F. Stephenson.
St. John's, ...	Mr. Munn and Mr. A. Wheeler.
St. Martin's, ...	Mr. Pierpoint and Mr. W. Hebb.
St. Michael's, ...	Mr. F. Stephenson.
St. Nicholas, ...	Dr. Malden, Mr. Sheppard and Mr. Romney.
St. Peter's, ...	Mr. Nash and Mr. Beck.
St. Swithin's, ...	Dr. Streeten and Mr. Hill.

Although the Board of Health did not consider themselves authorized to pledge the public to any remuneration of the medical officers taking charge of local districts, yet they have the gratification to state, that, at a very full meeting, twenty-six members of the profession being present, the medical practitioners most liberally tendered their services; which the Board accepted, in the full confidence that the public, if occasion should require, would not suffer such services to go wholly unremunerated.

Upon mature consideration the Board of Health are of opinion, that it will not be necessary to enter into any very extensive arrangements for the accommodation of patients affected with cholera; at the same time they suggest, that a small hospital, to the extent of five or six beds, with the means of providing more, should occasion require, will be highly desirable.

These preliminary arrangements having been entered into, it becomes now a matter of the first importance that the Local Committees should be brought into as effective a state as possible. Every credit attaches to the clergymen, parish officers, and other gentlemen belonging to these Committees, for the prompt and admirable manner in which they have performed the duties hitherto assigned to them. The Board of Health have further to suggest the following regulations to their consideration:—1st. To appoint district inspectors; each inspector to visit, frequently, a certain number of houses, and to enquire, carefully, after the health, comforts, and general state of the inmates.—2nd. To receive the reports of their district inspectors, at regular intervals.—3rd. To report to the Board of Health every thing connected with the state of health of the district.—4th. To hold frequent *regular* meetings for the purpose of carrying these objects into effect.

The Board of Health regret to state, that much poverty and distress have fallen under the view of the parochial visitors: many of their poorer brethren being in a state of great destitution. In some instances whole streets have been visited, where scarcely a house or family was provided with either blankets or bed linen. Of the cases detailed to them, without entering into particulars,

it will be sufficient to state, that families have been found lying on the floor, with a bag of shavings, or straw, for a bed, and nothing but an old coat or rug to cover them; the parents, perhaps, ill, or unable to procure work, and the whole family indebted to a scanty pittance from the parish for a bare subsistance. The Board beg to state, that nothing is found more to dispose to the attacks of epidemic or contagious diseases than such a state of destitution: the body suffering from want, and from disease, the effect of that want —and the mind from anxiety. They, therefore, earnestly recommend that the Soup House be opened as soon as circumstances will admit; and that the soup be made without pease, or green vegetables, but with a large proportion of meat, rice, barley, oatmeal, and other nutritive ingredients. It will also be necessary that some steps be taken to supply the poor with flannel, blankets, and other comforts of the like description, at reduced prices, to ensure sufficient warmth of clothing. And it is presumed that the gentlemen who superintend the distribution of coal, will attend to that object, when the severity of the weather requires it, as they have done upon former occasions.—One more suggestion the Board feel it an imperative duty to make, which is, that benevolent individuals will take into consideration the means of providing some healthful occupation for those who, in consequence of the existing difficulties of the glove-trade and other branches of our local manufactures, are thrown out of employ; since there is no surer preservative of health, both mental and bodily, than regular and sufficient employment. In order to carry these several recommendations into full effect, it will be desirable that a more regular and effective system of visiting the poor should be established.

In concluding their report, the Board of Health have the high gratification of acknowledging the kind co-operation which they have met with from all classes of their fellow citizens; and beg leave respectfully to offer their best thanks for the efficient assitance which they have received.

ARTICLE XIII.

Some account of the Diseases prevalent in Worcester and its Vicinity, during the year 1831.

The enquiries addressed by the Worcester Board of Health, to the Medical Gentlemen of the City and its immediate vicinity, were directed with the view of ascertaining the prevalence of disease during the past year, (1831) the general character of that disease, and whether bowel complaints had been more frequent than usual within a few weeks from the time the enquiry was made. The returns from which the following report has been drawn up, were presented to the Board early in December, and embrace the experience of nineteen practitioners in the city, together with that of a gentleman in very extensive practice in the country.

Seven of their returns state disease, generally, to have been much more prevalent than during former years; four, that there has been no increase; and the remaining eight contain no information

upon this point. The most decisive testimony, however, is afforded of the increased prevalence of disease, by Mr. Hill's report of the sick poor attended from the house of industry, by which it appears that, in the year 1831, there was an increase in the number of patients, up to the 23d November, of 188⅓ above the average of the three preceding complete years, the numbers being—

	1828	1829	1830	*Average.*	1831, *to Nov.* 23.
Cases,.....	805	857	971	877⅔	1065

A corresponding increase is also found to have occurred in the patients admitted at the Dispensary, though the number receiving relief from that institution, is necessarily limited by the amount of the subscriptions.

With respect to the severity of the disease prevailing during the same period, but too abundant evidence is afforded in the abstract of the burials before inserted. Upon the whole, then, it may be concluded, that the season of 1831 has been one unusually unhealthy, and the character of disease during that period, unusually severe.

The reports shew that fever, epidemic catarrh or influenza, and bowel complaints of various grades, have been most extensively prevalent.

The catarrhal affection of the pulmonary mucous membrane, commonly known by the name of influenza, appears to have been widely spread throughout the city and its vicinity during the summer months. Some few cases occurred in June, but it seems to have been at its height in July and August. A striking feature in this epidemic, was the extreme prostration of strength which accompanied and followed its attack. Towards the end of August, several of the cases, especially in old people, were attended with low typhoid fever, and some of them are mentioned as having proved fatal.

About this period, when the influenza had, in some measure, subsided, the abdominal mucous membrane appears more especially to have become the seat of disease. Many very severe cases of the common cholera of the country are reported in the several returns, and fourteen out of nineteen of these returns, bear testimony to the frequency of bowel complaints in general. Several of the cases, in which the vomiting aud purging were extremely urgent, are stated to have been attended with severe spasmodic pains in the stomach and bowels, together with cramps of the extremities. In most of them there was great prostration of strength, sometimes even approaching syncope, and in three or four, blueness of the nails and lips, with extreme pallor and lividity of the countenance, is reported to have occurred. The vomiting and purging appear for the most part, to have been of a bilious character, but in some very interesting cases which occurred in the county, the yielded fluids were dark-coloured and very offensive. Other modifications of bowel complaints have also prevailed extensively. Simple diarrhœa, and diarrhœa with tenesmus, were not infrequent, and some cases of dysentery are also mentioned to have occurred.

Low fever appears to have been of very frequent occurrence throughout the whole of the year, and the greater proportion of cases of this description, are noticed as being accompanied with a relaxed state of the bowels, and several of them with vomiting, especially after the autumnal season had commenced. No less than

eleven cases of fever are reported as having been attended with copious hæmorrhage from the bowels, of which several were highly alarming, the patients remaining for some time in a very precarious state, and one case terminated fatally. Both the low fever and the cases of bowel complaint, are, even at this season of the year, rather on the increase.

It should also be noticed as connected with the tendency to epidemic disease, that scarlet fever, hooping cough and measles, have also been very prevalent amongst children, and that in connexion with them, inflammation of the pulmonary mucous membrane has been of frequent occurrence.

But the disposition to severe disease of the mucous membrane of the alimentary canal, is not confined to towns; there appears to be an epidemic constitution of the atmosphere, extending to agricultural districts, and producing a disorder of the mucous membrane of the stomach and bowels, in a degree quite unusual at this season of the year. The following letter, from a gentleman who has an extensive practice in the country, adjacent to the Malvern Hills, shews that in his neighbourhood at least, a severe form of disease has prevailed.

A Letter from Mr. Lewis to Dr. Hastings.

Hanley Castle, Malvern Wells,
5th Dec. 1831.

Dear Sir,

At the present crisis perhaps you would like to know the state of health of the neighbourhood in which I reside. I have lately had several cases of severe disease, and will mention a few of them. The prevailing character of disease is certainly a great disposition to irritability of the inner coats of the stomach and bowels, at the same time accompanied with great prostration of strength and languid circulation. The two following cases are of a different character in some of the symptoms; but I consider them as arising from the same exciting cause, whatever that cause may be.

William James, æt. 74, labourer, an industrious man of sober habits, was taken ill, on 27th Nov. last, with violent pains in the bowels and head, attended with distressing vomiting of very offensive fluid of a dark, almost black, colour; the bowels obstinately confined. On the 18th, the bowels were moved tolerably freely; the stools black, and very offensive: he was a little relieved. On the 19th, the violent pain returned in the intestines, and he died on the morning of the 21st, without the possibility of getting the bowels to act after the 18th.

Mary Jones, ætat 69, taken ill 29th Nov. with violent pains in the stomach and bowels, attended with almost incessant vomiting of dark, almost black, offensive fluid; great prostration of strength; pulse weak, and countenance very pale and contracted; bowels confined; no means were successful in getting them to act, and she died on the following evening. She had walked to church on Sunday, 27th, a distance of a mile and half, and back. I consider that might have been the cause of her illness.

Thos. Hawkins, ætat 4, taken with violent vomiting and purging, so as to produce convulsions. I found, upon enquiry, that the

mother, fearing the child might be unwell from having eaten heartily of plumb-pudding, which his father had brought home from the Rhyd, where he lives servant, had given the child, in the morning, one tea-spoonful of Epsom salts and two tea-spoonsful of magnesia; the child is not yet quite recovered. Yesterday I was sent for to the mother, who was taken in the same way, excepting that the sickness does not amount to vomiting. I might add, that the mother was confined on the 19th, and unequal to the exertion and attention she gave the child. The father has also suffered in a minor degree, for this last three days.

Charlotte Welch, ætat 18, was confined, with her first child, five weeks ago; yesterday week she walked to church, a distance of two miles from her home, and back. The next day she began to suffer from pains in the bowels, which have very much increased, attended with constant vomitings and purgings, and great prostration of strength; the tongue exhibiting the same appearance witnessed in typhus.

I have seen a number of cases of the same description, but varying in degree. As I have not time, at present, I shall not state the cases at Mrs. Mathews', which are well know to you.

I am, dear Sir,

Your's, truly,

J. LEWIS.

ARTICLE XIV.

A summary of the Weather, for the year 1831, *extracted from a Meteorological Journal, kept near Worcester.*

The month of January was, for the most part, damp, cold, and cloudy; the prevailing wind came from north-easterly points, and there were about seven days of mild frost.

February commenced with a fall of snow, alternate snow and frost, till the afternoon of the 7th, when the wind set in from the S. W.; the two following days we had an uninterrupted gale from the same point; this influx of warm air from the surface of the Atlantic, suddenly raised the temperature to 59° on the 9th, and to 62° on the 10th; the snow, in consequence, melted with rapidity, and there were great floods on all the brooks and rivers. The weather continued mild and damp to the end of the month.

March was mild and cloudy till the 23rd and 24th, when we experienced a dry north-easterly wind, which continued, with the exception of a day or two, till the end of the month.

The first fortnight in April was mild, cloudy, and rather damp; the latter part of the month more dry. Thunder on one day.

The weather, in May, was mild and favourable for vegetation, till the 6th, when the maximum of the thermometer did not exceed 48°, with a cool N. W. wind, and showers of soft hail; the following night, unfortunately, became calm and clear, and the surface having received so little heat the day preceding, the radiation caused the thermometer to sink many degrees below the freezing point, and the frost, on the morning of the 7th, was most lamentable in its consequences, the greater part of the blossoms of the standard fruit trees were destroyed, and the first shoots of the oak,

ash, walnut, and a variety of other trees, received great injury, particularly in low situations. The remainder of the month was warm and dry, with easterly winds. Thunder heard on two days.

The month of June was warm and seasonable, rather dry, but with a sufficient fall of rain to secure the potatoe and grain crops. Thunder on five days.

The beginning of July was warm, but frequent showers cooled the air after the 9th. It thundered on six days.

August was, on the whole, warm and favourable for securing the corn harvest; there were, however, frequent showers. It thundered on six days.

A mild, warm, damp atmosphere, with frequent rain, accompanied by southerly or westerly winds, prevailed throughout the month of September. It thundered on five days.

October was uniformly mild throughout. High winds, as usual, from the S. W. towards the end of the month. Thunder on 26th.

November was mild and damp, but with less fog than usual. There were about three frosty mornings.

From the beginning of December, down to the 25th, mild and damp, with almost a constant wind from a southerly or westerly point. Cold, with gentle north-easterly winds, and cloudy weather, without frost, till the end of the month.

With the exception of the months of May and June, and some part of July and August, the year must be considered as exceeding the average fall of rain, and many days together were very damp and cloudy when there was no rain. From the beginning of June till the end of September, the same increase of thunder storms which has prevailed for some years past, has characterized this year. Thunder was heard in this neighbourhood on 26 days, and, according to the Newspapers, the accidents causing the death or injury of individuals, sheep and cattle, and damage done to trees and buildings, were very numerous. Comparing the number of thunder storms in this part of the kingdom, with the meteorological statement lately published, of observations made at Paris, we have experienced more than double the number.

Paris, 10 days on which it thundered.
Worcester, 26 ditto.

ARTICLE XV.

Parochial Returns of Births, Marriages, and Burials, that have been registered in the several parishes of the City and Suburbs of Worcester, including those of the several congregations who dissent from the Established Church, between the 1st of October and the 1st of December, 1831.

Births, 260; Marriages, 118; Burials, 193.

NOTICES.

The Sixteenth Number will be published on the 1st of May, and the succeeding Numbers Quarterly.

All Letters and Communications, addressed, free of expense, (under cover,) to the Editors, at the office of the Worcester Journal, will receive immediate attention.

THE MIDLAND

Medical & Surgical Reporter,

AND

TOPOGRAPHICAL AND STATISTICAL JOURNAL.

HOMO, NATURÆ MINISTER ET INTERPRES, TANTUM FACIT ET INTELLIGIT, QUANTUM, DE NATURÆ ORDINE, RE VEL MENTE OBSERVAVERIT; NEC AMPLIUS SCIT, AUT POTEST.—BACON, NOVUM ORGANUM.

No. XVI. MAY, 1832.

On Pericœcal Affections.

BY J. K. WALKER, M. D., HUDDERSFIELD.

I HAVE chosen the above term, to designate a class of diseases seated primarily in the cœcum, but, in their ulterior stage, extending not unfrequently to the colon, and sometimes to the bladder, vagina, rectum, or other contiguous viscera. In a former paper, I drew your attention to several instances of this disease, which had occurred to me, which presented the usual symptoms of pain in the right iliac fossa, and which, in some cases, were attended with a diffusion of the pain over a considerable part of the abdomen. Most of these patients were relieved by uniting depletion with the exhibition of mercurials, so as to affect the mouth. Since that period, other cases of a similar kind have occurred to me, some of them apparently of a more recent duration, with symptoms of an acute kind, whilst others assumed a more chronic form, in most instances preceded by some premonitory symptoms, varying according to the temperament and habit of the individual. This affection has not escaped the attention of French pathologists, especially M. Dupuytren; and some among our countrymen, have published interesting cases on this disease. But, so few are the cases on record, that I am compelled to believe that their frequency, both in the acute and chronic form, is much greater than is usually supposed. It is of some importance to detect the early indications of this complaint, as it appears from the concurrent opinion of those who have hitherto paid due attention to the subject, that the application of timely vigour has been successful, in a majority of cases, in subduing its first approaches, and checking its progress in its

nascent state. Even where there is reason to apprehend some effusion of lymph, or some incipient structural derangement in the part, a judicious combination of remedies, it seems, is adequate to produce absorption, and restore the parts to a healthy state. In the acute form, the disease must, of course, attract immediate attention, but where it happens (as is sometimes the case) that the approaches of the disease are slow and insidious, and such as fail to challenge attention, the opportunity of a speedy removal is often past; and even where some uneasiness is felt in the part, how common is it to regard such cases, sometimes as colicky affections, or any other functional derangement of the liver or the bowels. Perhaps the treatment adopted in these instances, *may happen* to be that best calculated to arrest the progress of this disorder, and all the symptoms may vanish *without any suspicion of the real origin of the disease;* especially since the practice of employing glysters has been more prevalent in diseases of the intestinal canal in general.

But if the practitioner, placing his sole reliance on a succession of cathartics, shall content himself with exchanging one purgative for another, and persuade himself that, because there is some appearance of stools, all is right in the bowels, he will often have reason to rue his mistake. In fact, these purgatives may (especially if of an acrid and irritating kind) prove a source of aggravation rather than relief; they may, it is true, expel some scanty fœculent discharge, but far larger proportions may remain behind, partially dislodged, perhaps, from their former situation, but detained in a distended portion of the gut, where there is still less hope of dislodging them by the use of aperient remedies. It is on this account that it appears advisable in all obscure affections of the bowels, where a fair trial of appropriate cathartics has been resorted to in vain, to lose no time in adopting the exhibition of enemata, repeated as often as the exigency of the case requires; and in no disease is this plan more necessary, than in that which forms the subject of the present paper, which, in a plurality of instances, derives its origin from a natural or acquired, sluggish habit of the bowels.

Perhaps, where the quantity of impacted fœces is not large, it may require considerable pressure to produce pain in the cœcal tumour; nay, the tumour itself, in persons of full habit, may not be easily detected; but, when the disease has continued for some time, a *proper examination* of the abdomen will, in most instances, enable us to detect the latent mischief; and truly, when one considers the complex mechanism of the part, and the important functions it has to perform, the wonder is, not that it so often becomes the seat of disease, but, notwithstanding the frequent overloaded state of the intestinal canal, and the frequent passage of irritating substances, (so admirably adapted by the Great Author of our being, is its structure to the function it has to perform,) that it shall continue year after year, perhaps for three score years and ten, to retain, unimpaired, the integrity of its

curious mechanism, and perform to the last, the office assigned to it, when other parts, apparently less obnoxious to injury, give rapid note of fatal disorganization. But, before I proceed to expatiate more largely on the structural diseases of this part, it may be right to present a succinct account of its mechanism, of the valve of the colon in particular. We find a projection of the extremity of the small intestines into the cœcum, produced chiefly by a doubling of the mucous membrane of the cœcum, which, folding back upon itself, is united to a similar doubling coming from the extremity of the small intestines, so that at its middle, this valve is formed by four layers of the mucous membrane; on opening the cœcum towards that part which is opposite to the entrance of the ileum, we shall observe a large semilunar fold, transversely situated, having its upper part turned towards the colon, its lower towards the cœcum, with a convex body next the opening of the ileum, and the side of the cœcum to which it is fixed, and a loose concave border, divided in the middle into two lips, by a long chink directed towards the ileum, and hanging into the cavity of the cœcum. Such is the complexity of this exquisite structure; other circumstances conspire to give increased liability to disease in this part. The contents of the alimentary canal have to overcome their own gravity, for a short space. in their passage to the colon. One would infer, therefore, a priori that any adventitious impediment would arrest the propulsive power of the muscular fibres of the bowels. But instances are recorded where alvine concretions have been lodged in the caput coli for years, and, in some cases, they have been discharged by the anus. Dr. Monro, in his morbid anatomy, has recorded several interesting cases of this kind, and had, in possession, not less than thirty alvine concretions, passed by stool, by different persons, or extracted from the anus, or found within the intestines after death.* They are as firm in their texture as a hat, and cannot be dissolved by any medicine which could be used with safety; as might be expected from the irritation caused by their presence, and especially where the size is such as to occasion expansion of the coats of the part containing them, an irregular state of the bowels is the usual consequence, sometimes diarrhœa, at others, constipation. When they change their situation, and pass down into the rectum from the distention of the part, the pain is often acute, accompanied with a sense of weight in the back part of the pelvis, and a constant desire to go to stool.

It is well known that pins, needles, pieces of bone, stones of fruit which have been swallowed, have reached the intestinal canal, where they have been detained, and formed the nucleus of alvine concretions. These extraneous bodies have afterwards been found imbedded in the centre of the concretion. Occasionally intestinal concretions occur in very early life, and prove

* Vide Dr. Monro's Morbid Anatomy.

fatal. The case described by a surgeon* of Paisley, which was regarded by him *as a disease of the liver or mesenteric glands*, proved, on post-mortem examination, to have arisen from a very different cause. The liver was sound, but the ascending and transverse portions of the colon contained three concretions of unusual size, and weighing $12\frac{1}{2}$ ounces. The boy, who had been the subject of this disease, had been sickly from his infancy, being subject to purging and pain in his belly, where a hard lump was sometimes felt. In the case which I shall next introduce, the result was more gratifying, the concretion having made its appearance in the rectum, where it was extricated by means of the forceps. The case occurred to Mr. Jubb, an eminent surgeon, at Halifax, who has favoured me with the following account of the case, which shews for what a length of time the system is able to bear with the irritation incidental to cases of this kind, without sinking under its effects.

Case I.—Lydia Turner, æt 42, has *for twenty-three years*, suffered from pain in the right iliac region, with considerable tumour, which varied in size, and was larger at the time of menstruation. She was subject to great irregularity in her bowels, had frequent diarrhæa, and could part with little at once, which was as frequently followed by constipation. January 21, 1827, whilst carrying a can of water, she felt, as she described, something break, and fall down, with immediate desire to have a motion, but without effect; after passing a restless night, she sent for me, and stated that she had something to part with, and that she had had pains, as strong as labour pains, all night. On examination, I found a hard substance in the rectum, pressing against the sphincter ani, which appeared too large for the passage. It was, however, with some difficulty, removed with a pair of lithotomy forceps, and proved to be a large scybalous mass, very hard and rough. She lost the pain, and tumour in the side, immediately, and has had no return of it since.

It is an interesting enquiry, how far certain peculiarities of diet favour the formation of these intestinal substances, which not unfrequently lead to organic mischief. It is supposed that certain articles of vegetable food, oatmeal for instance, have a greater tendency than others, to give rise to such concretions. However this may be, we know that indulgence in unwholesome or indigestible aliment, or excess in diet of any kind, will frequently induce costiveness, and those who, after a hearty meal, have ventured upon any violent exercise, not unfrequently feel more or less of pain in *the right side*, as if some sudden shock had been inflicted on the part, by this untimely exertion of the abdominal muscles. Whatever, in fact, has a tendency to disturb the process of digestion, and impair the healthy functions of the organs subservient to this end, must exercise more or less influence on the bowels, and on the healthy appearance, as well as regular

* Mr. Torbet, Surgeon, Paisley, Ed. Journ. July, 1825.

discharge of their contents. We know that it is on their approach to the cœcum, that certain changes take place in the colour, consistence, and smell of the fœcal contents. In a state of health, we do not find that they cause any irritation, but if in a morbid state, what so likely to disturb the performance of the regular functions of the part? Long-continued habits of costiveness, and consequent accumulation of fœces in the colon, necessarily affect this part, as well as intestinal irritations of any kind.

It is not difficult to conjecture how any tumour exterior to, and causing pressure in its vicinity, may, in some degree, paralyze the propulsive force necessary to transmit the fœculent mass from the small to the larger intestines. It is enough that any of the neighbouring viscera shall be only slightly deranged in their structure, to create obstruction to the regular transit through the valve; again, any disease in the ascending colon, or of any viscera seated in its neighbourhood, let it be of the peritoneum, kidneys, or liver, must (not merely by sympathy or through the medium of the constitution) but more or less, mechanically, impede the right performance of the valvular functions; on the other hand, while diseases in the contiguous viscera are apt to superinduce affections of this kind, the converse of this is equally true. Let the disease be ever so much confined in its initial form, to the cœcum, yet, in process of time, if the affection remains unsubdued, other organs share, perhaps only functionally in the first place, but subsequently, structurally in its progress. If the hardness and pain in the right iliac fossa escapes attention, or is not checked before the period of ulceration begins, the peritoneum becomes involved, and we have often a fatal form of peritonitis to encounter. In other instances, the kidneys or the bladder, or the iliacus internus, are implicated in its ravages. Every one knows how immediately the functions of the liver are affected, when the ascending or transverse arch of the colon is distended with fœces, and how often this state of things is mistaken for hepatitis itself. Some uneasiness, and considerable fullness in the right hypochondrium, obtain in both affections; nay, the pressure of a loaded colon on the ductus communis choledochus has been known to occasion an icteric appearance. In both, there is usually more or less of constipation, and, perhaps, dyspnœa. This may be the case when the cœcum is unimpaired in its structure, but when that part is enlarged and inflamed, such is its effect upon the other parts of the colon, that the functions of the liver are rarely unimpaired. But, should the tumour of the cœcum be only small, nothing is more likely than that it will escape attention, and the disease is charged upon some neighbouring part. Nay, such is the fallacy of diagnosis, that the disease has, in the same patient, at one time been considered as nephritis, at another enteritis; and it must be confessed, that so obscure were the symptoms, that there was sufficient ground for this uncertainty. Patients may, perhaps, complain of pain in the loins, while, at the same time, the urine

is of a deeper colour than usual, and the symptoms seem, in many respects, to simulate nephritis. Hence the real seat of disease becomes masked. In many instances, however, such is the relative situation of the parts, that they become, by slow degrees, involved in the same disorganization. It is impossible to describe the different stadia of this disease, modified as they are, by temperament, by habit, and other incidental circumstances. It seems probable that, whenever fœcal accumulations in the cœcum become stationary, the mucous tunic is obstructed, and the glands, no longer able to secrete mucus, become loaded. The mucous membrane lining the interior of the colon, may, in its turn, be similarly affected, and the fœces suffer detention; and if the infarction take place in the transverse arch, not only the liver, as I have before observed, but the stomach, and the viscera situate within the thorax, are affected by it. Nor do I think it improbable, that many anomalous symptoms in other parts of the body, may arise from this cause, for we daily see the effects of mechanical pressure, when applied to nerves and blood-vessels. Here we have a morbid enlargement situate so as to press upon the right iliac veins and nerves, and quite adequate to extend its effects to remoter parts, and even, in some instances, to superinduce a tendency to a paralytic state, or, in others, œdematous affections. In this way, even the return of blood from the head may be impeded, and all the symptoms of cerebral congestion may follow, so as even to mislead the practitioner, who may be looking for some organic derangement within the brain, when the fomes of the evil lies within the abdomen. Sometimes vertigo and cephalalgia are so considerable, as to call for active treatment. A case of extraordinary constipation of the bowels, is recorded by Dr. Barlow,* of the Bath United Hospital, where the patient, a female, æt. 24, had no stool whatever for thirteen weeks. More than a year before, a *circumscribed swelling was observed* in the situation of the cœcum, which gave way to the application of leeches and a blister, but the costiveness was not subdued, though the catalogue of purgatives was exhausted to procure free evacuations; at intervals of several weeks, scanty dejections, consisting of hard and dry scybala, sometimes resembling burnt coal in character, were brought away by a succession of drastic cathartics, and occasional enemata (ope syringis.) Again, the swelling at the head of colon was perceptible, and gave pain to the touch: but allusion is made in the interesting report of this case, to pain in the head, so great as at times to deprive her of her senses. It is gratifying to find that, by a judicious combination of aperients and enemata, aided by local treatment, this obstinate affection was eventually overcome, and the patient restored to health. I had, myself, occasion to see a patient, but a few weeks ago, (in company with Mr. Ham-

* This case is so instructive, that I beg to recommend it to the perusal of your readers. It is detailed in Dr. Johnson's Medico Chirurg. Review, vol. 12.

merton, surgeon, of Elland,) who laboured under very obstinate constipation, which resisted the action of a variety of powerful cathartics, and such was the loaded state of the colon, and pain in the right side, that, from the symptoms, without particular examination, it might have been regarded, primâ facie, as some hepatic affection. The alvine excretions, for several months past, had been both scanty and of an unhealthy appearance, and about two months ago, he complained of *pain in his side*, and frequent head-ache. At the time I saw him, there was little left for me to do, except to follow up the judicious plan of treatment adopted by Mr. Hammerton, who had, after proper previous depletion, resorted to the daily use of glysters, in aid of the aperients given by the mouth. To the part of the right side, where tenderness was felt, leeches and blisters were successively applied, and so great was the pain in the head, that leeches were found necessary to that part; but neither the pain in the head nor in the side, were effectually relieved, until after a long perseverance in the above plan, the bowels began to act more freely, and the stools to return to their healthy appearance.

Another instance of pericœcal affection, occurred in one of the out-patients of the infirmary, where a state of stupor prevailed for several days. The patient, Harriet Swallow, æt. 24, is one of those cases which had been relieved of this disease above a year ago, (some account of which I have given in a former number of your Reporter,) but the recurrence of obstipation had never been entirely removed, though she occasionally used aperients. The tumour in the right iliac fossa was easy to be felt, and was both hard and painful, and for several days the febrile symptoms were considerable. The pain, indeed, was abated by local depletion, but the tumour is at present still to be felt. Finding that aperients were ineffectual, or caused very scanty evacuations, the use of enemata, *repeated twice a day*, was continued for many days, latterly with the syringe. For a long time, nothing but scybalous stools were brought away, the number of scybala increasing daily, so that there is reason to hope that these fœculent masses, which appear to have imbedded themselves with such pertinacity in the cells of the colon, will, in time, be so far removed, as to allow the purgatives by the mouth to act more freely. Though the pain in the head is not removed, the comatose symptoms have all disappeared. I have selected this case for insertion, in preference to some other examples of this disease, because it has, at different times, given rise to so many anomalous symptoms, modified, as I suppose, by an hysterical diathesis.

The following case of cœcal inflammation, transmitted to me by Mr. Astin, surgeon, of this place, will serve to shew that these affections are usually effectually relieved by early judicious treatment, and further mischief prevented.

Case II.—David Shaw, æt. 21, a weaver, on the 7th Sept. last, was attacked with pain in the right iliac region, and great tenderness, on pressure, on that part. Pulse quick; alvus

adstricta. The first general bleeding not affording relief, a second was had recourse to; at the same time, leeches were applied to the part. In this case, the bowels resisted the action of powerful cathartics, and it was not until a large glyster was thrown up, that they yielded to the action of aperients, the use of which was persevered in for eight or ten days, and a blister applied to the part. At this period, some irritation of the mucous membrane of the intestines gave rise to pain and frequent stools, of a dysenteric appearance, which were relieved by the hydrarg. cum cretâ and small doses of ipecacuanha. The mouth was affected by the mercury, and the progress to convalescence was afterwards uninterrupted; *all traces of the tumour disappeared.*

Case III.—Mary Peel, æt. 20, with an infant at breast, was attacked with violent pain in the abdomen, but especially in the right iliac fossa, where a distinct tumour was felt, to which leeches and blisters were successively applied, and the calomel given so as to affect the mouth. After this, the tumour gradually disappeared, and, by a perseverance in the use of aperients, the symptoms were all removed.

Case IV.—David Hirst, æt. 37, shoe-maker, was cured of an abscess in the right knee, in the month of August last. On the 18th October, when I first saw him, he complained of pain in the right iliac region, and tenderness on pressure, or on moving the right leg. General and local bleeding was followed by a repetition of aperients, and the mercury pushed to the extent of affecting the mouth. Under this treatment, he was decidedly relieved. Soon after, however, in consequence of some irregularity in his diet, the symptoms returned, and a tumour was felt, at first small, but increasing gradually to a considerable size. It has since gone on to suppuration, and is, at this time, beginning to discharge outwardly.

The two first of these cases may be regarded as fair examples of the affection in its acute form, in both instances a deep-seated tumour was detected, and in both relieved by active depletion, followed by aperients and the exhibition of mercury, so as to affect the mouth. The third of these cases I had myself the pleasure of visiting, in company with Mr. Astin, a few days ago, when there had occurred a material diminution in the size of the tnmour, from the continual discharge of pus. It was of an elliptical form, deeply imbedded, hard and immoveable, and, in its lower portion, rather tender to the touch. Its longest axis was nearly eight, and the shortest more than four inches long. Extending in an oblique direction, its inferior margin reached the pubis, and its upper extremity ascended above the level of the crest of the ilium. From the abscess having continued to discharge for more than a week, without the slightest appearance of fœcal matter in the poultice, it is hardly possible to say how far it may be connected with the intestine below, especially as the bowels are regular, and the fœces without any purulent appearance, and the constitutional symptoms slight.

In all the above instances, it was ascertained that the previous state of the patient had been characterized by a sluggish state of the bowels, but not greater than is often the case in many, who feel no inconvenience from it. In this, as in other diseases, some are more susceptible than others, so that a degree of excitement, adequate to the generation of disease in one man, will be utterly powerless in another. The same cause, which in one, would occasion colicky symptoms, in another, might, under different circumstances, produce a dysenteric affection, or a diarrhæa; in a third, a feculent distention in some part of the colon. Instances, too, occur, when chronic colinitis supervenes on long continued constipation, which may give rise to organic derangement of contiguous viscera.

Cases are not wanting to shew that violent and irregular action of the heart, not easily distinguishable from organic disease, has accompanied active disease of the intestines. It is well known that, in some constitutions, any irritating cause in the abdomen, whether seated in the liver, stomach, or intestines, is sufficient to accelerate the stream of blood in its transit through the venæ cavæ and lungs, and in this way to give rise to inordinate action of the heart. Every one has seen instances, where enlargement of the liver, with its constant pressure on the diaphragm, has so disturbed the functions of the heart and lungs, as to excite a suspicion of those viscera being the seat of disease. From this cause, symptoms have arisen which have deceived the practitioners into an opinion of some organic affection in or about the heart, where nothing could be detected by post obit examination, but disease of the colon and termination of the ilium. Duchateau has given us a remarkable instance of this kind, exhibiting, in a remarkable degree, the fallacy of diagnosis. He has favoured us with the details of the symptoms and morbid appearances of a patient, whose disease had been pronounced by all the physicians whom he had consulted, and particularly by Corvisart, to be aneurism of the heart. How erroneous this diagnosis was, the dissection of the body after death clearly evinced, for it appeared that not only the heart, but all the thoracic organs were sound, as were the stomach, liver, gall bladder, spleen and pancreas. Nor was there any morbid appearance in the duodenum and jejunum, but the *ilium, for many inches before its junction with the colon*, was livid and gangrenous throughout. *The colon itself was distended* and blackish, the whole right portion was sphacelated and perforated to the extent of a crown piece.* But, what were the symptoms during life in this case? The patient is said to have complained of intolerable palpitation of the heart, load at the stomach, constriction of the chest, and violent head-ache. The pulse was full, hard, irregular, particularly in the left arm; epigastrium tense; parietes of the chest elevated by frightful pulsations, and

* On Disease of the Colon.

rendering an obscure sound on percussion. Such were the symptoms of a case which misled the ablest practitioners. Disease in the intestinal canal, it seems, was hardly suspected. But if, on the one hand, extensive disease of the colon can proceed, from one step to another, till fatal disorganization takes place, without any suspicion of such affection; it is equally true, that very considerable pain exists in the right side, which may be entirely owing to nervous causes. How often do these strange and anomalous modifications of hysteria in females simulate organic disease! What viscus has not, at various times, been suspected of structural derangement, when irritation alone was the sole source of the mischief? At one time the head, at another the thoracic and abdominal contents, have been regarded as labouring under active disease, so alarming in appearance as to have been treated as such. And it seems to me that, in many cases, the nicest discrimination cannot always draw the line of demarcation, between the symptoms arising from actual disease in a part, and mere sympathetic irritation. The former, indeed, may, in process of time, become the sequel of the latter, so that it is often extremely embarrassing to the practitioner to decide upon the proper course to pursue. This state of things has often led to the adoption of the depleting system, where other remedies, especially a restoration of a healthy state of the bowels, would have been sufficient to remove all the anomalous symptoms. I had occasion, but a few days ago, to experience the truth of this in a young woman, an out-patient of the infirmary, who was subject to serious attacks of hysterical convulsions, so violent as to excite fears for her life. The pain in the head was often intense, sometimes the coma continued for hours. But though there was great abdominal fulness, and long protracted constipation, *no part of the abdomen gave such indications of exquisite pain as the right iliac fossa.* This patient being of a full habit, was bled, and leeches applied to the tender part, but no relief was given, until repeated enemata (with spir. terebinth and ol ricin.) gradually unloaded the whole tract of the colon, and the bowels afterwards yielded to the action of aperients. In most instances a defective state of the catamenial discharge seems to communicate a corresponding torpor to the intestines, whether from mere sympathy, or from occasional overloaded state of the uterine vessels acting mechanically on the bowels, I am not able to decide; but the pain on the right side, in hysterical patients, is so frequent, as to render it probable that where costiveness attends, the cœcum may be sympathetically affected.

I have stated that fœcal accumulations in the colon are known sometimes to affect the healthy functions of the heart. The same also occurs with respect to the lungs. We have instances, even, of patients having pain in both sides, accompanied with cough, dyspnœa, and emaciation, and when, in fact, the case has resembled incipient phthisis; and yet this train of symptoms has gradually receded on a restoration of the bowels to their

healthy state.* In an Edinburgh Journal now lying before me, I find the details of a case of a lady, who, three years previously, had been sent to Madeira for incipient phthisis, having pain in the side, cough, and difficulty of breathing, with subsequent emaciation; after a year's residence at Madeira, these symptoms were overcome, and she returned, apparently cured; but, soon after her return, a recurrence of the same symptoms took place, when a more minute examination took place. The result was, the detection of pain, on pressure, *on the iliocœcal region*, as well as the sigmoid flexure of the colon. Some yellowness was observable in the eyes; a bitter taste in the mouth. The tongue was loaded,and the bowels constipated. The presence of symptoms like these, could not fail to draw the attention to the abdominal viscera, and the origin of the cough was believed to be below, rather than above the diaphragm. It is needless to add, that a corresponding treatment was adopted, and three days of active purgation unloaded the bowels of a large quantity of scybalous stools. From this time the pectoral symptoms gradually disappeared, and the patient regained her health. Such cases are useful, inasmuch as they point out the errors a man may fall into, who trusts implicity to appearances, without minute investigation. I have stated that a majority of affections of the cœcum, if met by timely treatment, usually terminate in a resolution of the tumefaction; and even after a suppurative process, the pus escaping either externally, or by the rectum or bladder, recovery occasionally takes place. Such instances are recorded by M. Dupuytren and others. It appears from that eminent practitioner, that he has found, in some fatal cases, the cellular tissues in the neighbourhood of the cœcum, infiltrated with purulent matter, and this infiltration extended to the kidney of that side, and down into the pelvis, even to the rectum and bladder.

In such instances, general peritonitis was usually formed, with effusion in the cavity of the abdomen, and adhesions between the intestinal convolutions; and, indeed, it is more than probable that if post-mortem examinations were oftener resorted to, the appearances, in fatal cases of peritonitis, would shew that the peritoneal affection was rather a sequel, than the source of the symptoms. If a practitioner is called, for the first time, to a patient with peritoneal disease of this kind, he finds the tenderness, on pres-

* Dr. Greaves, in the Dublin Hospital Reports, records an instance where a considerable portion of the transverse arch of the colon, instead of its usual position, occupied the left side of the chest, and pushed the heart and mediastinum towards the right side. The patient died with symptoms of tubercular phthisis. During life those who examined the chest, could not reconcile the phenomena afforded by auscultation or percussion, with those of any known disease of the chest. The respiration was heard everywhere, except inferiorly and anteriorly on the left side, and here percussion gave a clearer sound than natural. No rale was audible on this part of the chest, but borborigmi, and sounds resembling those produced by the motion of fluids in the intestines, were observed.

sure, so exquisite and so diffused, that it is impossible to conjecture the extent of the mischief from superficial examination only. He knows that the membrane lining the parietes of the abdomen is inflamed, and he judges, by the state of the bowels, whether any or what are the tunics, that are probably implicated in the disease. If pus is seen in the stools or urine, he is still uncertain. In the former case, he might suppose ulceration of the mucous membrane of the bowels; in the latter, suppuration of the kidneys, but cœcal abscess is rarely suspected. And if, by a perforation of the gut, the matter should escape into the cavity of the abdomen, what opinion can he form of the immediate cause of death anterior to examination of the morbid appearances of the viscera? In the Dublin Hospital Reports, we find several cases of fatal peritonitis recorded by Dr. Stokes, where post obit investigation revealed the secret. In one case of peritonitis which terminated fatally, the account of the morbid appearances informs us that, in detaching the caput coli from the peritoneum lining the right iliac fossa, a small perforation of the gut was discovered, by the escape of the contents of the intestine in a jet. The serous membrane lining the iliac fossa, was found of a bluish colour, and softened for a considerable space, and the same was observed in the lower portion of the ilium.* Sometimes the progress of the disease is slow, and extends its ravages to the adjacent viscera, and the inflammation gradually extends itself to the peritoneum lining the parietes, as well as that covering the intestines. In the fatal case of peritonitis described by Mr. Ferrall, (whose paper on this subject, in the Edinburgh Medical Journal, is rich in practical observations,) we find, on dissection, that the peritoneal coat of the intestines, as well as that lining the abdomen, was thickly coated with lymph, and the bowels themselves so matted together, as to be one mass. The cœcum was covered with lymph anteriorly, and much thickened in all its circumference. Its mucous coat was thickened and pulpy; the colour was deeper as it reached the ilio-cœcal valve; the mucous membrane at this aperture, projected considerably all around. In this case, there can be little doubt that the affection of the cœcum was the primary disease. It was here, the first sensation of pain was felt. This appeared to be the focal point, from which radiated the surrounding changes of structure, and a fatal case of peritonitis supervened from this cause. The thickened state of the

* In a fatal case of peritonitis which I attended, we found, on dissection, the convolutions of the bowels agglutinated together, and covered in their peritoneal surface with marks of ulceration; but what most attracted my notice, was the alternation of constriction and dilatation of the colon, especially in the ascending portion. So great was the contraction in one part, that it was barely large enough to admit a common quill. This person had long laboured under colicky complaints as they were called, and obstinate costiveness, though he had for years used the most drastic cathartics. He had not, however, resorted to the use of injections, so useful in these cases.

valve resembled the appearance of the rima glottidis in fatal laryngitis, and this was sufficient to account for the symptoms of stercoraceous vomiting which occurred in the last stage of the disease. It will sometimes happen that extensive inflammation, and even mortification, may take place from fœcal coacervation, without superinducing the ordinary pyrexial symptoms, for it is well known that constrictions in the large intestines are, in general, not accompanied by the same acute and violent symptoms, that so commonly occur in similar affections in the smaller. The symptoms, indeed, may be those which are regarded as colicky affections. There may be no fever, no mark of irritation in the pulse, yet, on dissection, the whole tract of the intestines may be inflamed. This was the case in the instance related by Dr. Willan.* The patient had long been subject to frequent attacks of pain in the bowels, and troublesome constipation, and was subsequently seized with the usual symptoms of colic, attended with almost constant vomiting. Purgatives of every description were exhibited, as well as glysters. After six days obstruction, and great pain at intervals, *there was still no fever*, nothing in the pulse to indicate inflammation, and but for the post-mortem inspection, the real nature of the affection would have continued a matter of conjecture. It was then seen that the bowels were amazingly distended, particularly the caput coli, and containing not less than four gallons of fæculent matter. Inflammation pervaded the whole intestinal tube, and, in some parts, appearances of sphacelation presented themselves; and the lower part of the colon was quite hard and callous.

In enumerating the various causes which tend to impart unhealthy condition to the bowels, and interfere with the regular expulsion of their contents, it seems to me that too little stress has been laid on those of a nervous origin. We are told that a section of the pneumogastric nerves has been found to paralyze the duodenum and the upper portion of the small intestines, and that the inferior portion is under the influence of the spinal marrow. We every day see, in cases of injury to the spine, that there is, sometimes, incontinence of urine and involuntary evacuation of fæces; at others, restoration of both. Should a less degree of spinal disease exist, especially in that part which supplies nervous influence to the intestines, may it not also impart proportionate torpor to the muscular coats of the bowels, and occasion a detention of the fæces, and consequent morbid accumulations? I can only say that, in many instances of evident spinal affection, it has occurred to me to witness most obstinate constipation for months together, and which, indeed, was only relieved by a gradual recovery from the spinal irritation. I should have no difficulty in adducing examples to prove this, were it not a matter too much of daily occurrence to render it

* Vide Dr. Willan's Miscellaneous Works.

necessary.* Morgagni alludes to the case of a woman who had a fall on her back, a year before, having been afflicted with a very great deep-seated and excruciating pain in her belly, which terminated fatally. He found, on dissection, her stomach surprisingly contracted, and the cœcum so dilated by stercoraceous matter, that it resembled the stomach. This intestine had been seized with inflammation, which had begun to diffuse itself through the neighbouring viscera. It is assuming too much, to say that the disease in question arose from injury inflicted on the spine, yet, if the colon itself was the seat of lesion, primarily, it is singular that active symptoms should not earlier have developed themselves. However this may be, the case is so far useful, as shewing that any violent shock or exertion is capable of inflicting functional, and eventually structural, injury on the cœcal portion of the bowels. As no dissection of the spinal marrow took place, we cannot decide what share it had in the disease; but, cases of chronic colonitis are recorded, where a frothy serous effusion was found in the lumbar portion of the meningeal cavity, the vessels of the meninges being exceedingly injected. The same took place in a patient who died of chronic peritonitis, and such instances only shew how much we have to learn of the pathology of the different parts of the body, and how much light, future morbid researches may throw, on many at present anomalous symptoms.

I cannot conclude, without congratulating you on the awakened attention of the profession, to the pathology of the mucous membrane of the digestive organs, as affording a prospect of a better knowledge of a more scientific treatment of the many obscure symptoms which attend diseases of its structure. It seems that chronic affections of this part may exist for a long time, without exciting any suspicion, and that they give birth to a large proportion of those anomalous affections of the chylopoietic viscera, which perplex the practitioner. But when we consider the endless variety of substances that are constantly traversing the tract of the intestines, many of them of an irritating nature, we can only wonder that a membrane, such as lines the bowels, in many parts so exquisitely sensible, is not oftener the seat of disease. It seems to have been too much the practice of pathologists formerly, to confine their post-mortem examinations to the exterior surface of the intestines, neglecting its interior appearances, than which, nothing could more effectually mislead; for it is no uncommon thing to see the peritoneal coat quite free from

* Vide M. Brachet, M. D., Recherches Experimentales sur les fonctions du Systeme Nerveux Ganglionnaire, &c. an experiment demonstrating this. The section of the par vagum does not stop exhálation, secretion, or absorption, in the small intestines. These functions, then, are under the guidance of the ganglionic nerves. The lower portion of the ilium, the colon and the rectum, as well as the bladder, are governed by the cerebro-spinal system, as far as motion, and the sense of nisus to evacuate are concerned.

disease, when the subjacent tunics are deeply involved in disorganization. On the other hand it may happen, as M. Broussais has shewn, that considerable irritation may continue for some months in the mucous membrane, and yet no vestige of its appearance be detected after death. In those cases where the disease is of longer duration, disorganization is always observable. The constitutional symptoms that develope themselves, in affections of the mucous membrane, are endless. We find that upon its healthy state depends the regular expulsion of the fœcal contents; that in a state of disease, the regularity and quality of the dejections are affected; at one time giving birth to diarrhæa, at another to dysentery, or, by protracted disease, to marasmus or dropsy. In many instances of dissections of fatal cases of fever, ulcerations are found here, after death. In one case, the ulcers gradually increased in size and depth, as the iliocœcal valve was approached, where they occupied the whole circle of the gut. Nay, in dissections of infantile diseases, which have resembled the common bowel complaints of children, arising from irritation of dentition, patches of inflammation have been detected in various parts of the mucous surface of the intestines, especially the ilium, which is often the seat of ulceration.*

It is well known that, during the prevalence of certain epidemics, there is often more than ordinary determination to the mucous membrane; at one period, the mucous membrane of the lungs, at another, that of the bowels being the seat of the affection. This, for instance, was the case during the last and present winter, in this part of the country, where the number of anomalous intestinal diseases has been unusually large. Some of them were of an hæmorrhagic character, and accompanied with subtyphoid symptoms. It has been asserted by a French writer that, after numerous dissections conducted with the greatest care, he has found that inflammation of the lower portion of the small intestines, and upper surface of the iliocœcal valve, has been a frequent occurrence in typhus fevers. He observes that it is very rare to see any derangement of structure in the duodenum, jejunum, or colon; often, the cœcum itself is not affected, although the upper surface of the valve is usually implicated in the disease. It sometimes happens that these affections are so insidious in their infancy as to elude notice, and are confounded with mere casual disorder of the bowels. The period is often past when their early indications might be effectually arrested. So convinced is M. Bally, (the author above mentioned,) that the mucous membrane of the ilium, and upper surface of the colon, is the primary seat of many types of fevers, that he has characterized them with the very significant appellation of "ileodiclidites," which implies an inflammation of the ileum and upper surface of the valve of the colon. These morbid appearances have hitherto been too much regarded rather as the

* Vide Dr. Abercrombie on the Diseases of the Mucous Membrane

consequence of the febrile affection, than as its origin. However erroneous this hypothesis may be, when applied universally, little doubt can be entertained that, in fevers as well as in many disorders, when it is least suspected, the mucous tissue of the digestive tube is the first to participate; and, if there is any truth in the supposition, that the pericœcal region is the part where the irritation first begins, it is of the last importance in a therapeutic point of view to ascertain this fact, as early treatment applied to the iliocœcal region, might succeed better than any other plan in giving a check to the first dawnings of disease. It is no uncommon thing to find many of the groups of muciparous glands in various stages of ulceration, in febrile diseases, in which, during life, the intestinal irritation had been considerable. It is probable that these glands, which are so minute as seldom to be seen, except in a diseased state, though they are supposed to be dispersed over the whole of the canal, play a more important part in the production of morbid phenomena, than has usually been assigned to them.

We know that upon their healthy functions depends the due secretion of mucus, necessary for lubricating the passages and shielding the membrane itself from the action of irritating substances, and facilitating the passage of excrementitious matter. It is to be hoped that, in this age of physiological enquiry, fresh light will be thrown upon this interesting branch of the animal economy, so as to enable us to appreciate, with a greater degree of accuracy, the share these glands have, in a morbid state, in producing the various forms of disease that present themselves in the bowels, and, through them, to almost every part of the body. It may teach us, too, a more cautious selection of purgatives in obscure affections of the bowels, in many of which, much mischief is occasioned by acrid cathartics, where more emollient remedies would have soothed the irritability of the mucous membrane, especially the occasional use of emollient glysters. This applies particularly to the supposition of disease in the mucous membrane. Where costiveness arises from other causes, the case is different; more powerful cathartics may be required to expel fœculent masses in the bowels, as well as to eliminate foul congestions from the biliary ducts. In every instance, the preference of one aperient over another, must therefore depend on the particular symptoms of the case; and he who has paid most attention to the pathology of the intestines, will be most likely to use caution in the choice of his remedies, conscious that an error, in this respect, may inflict mischief which no subsequent skill can effectually remove.

ARTICLE II.

On Dropsy, with Coagulable Urine.

BY EDWARD BARLOW, M. D.

Physician to the Bath United Hospital, and to the Bath Infirmary.

The presence of albumen in dropsy, is so important a feature of disease, having direct relation both to the pathology and treatment, that it merits the serious consideration of every practitioner. In 1813, Dr. Blackhall, in a highly interesting treatise on dropsy, directed attention to this peculiarity of dropsical urine. Dr, Bright has since pursued the enquiry with great ability and zeal, and in his valuable hospital reports, has traced a close connexion between coagulable urine and a peculiar change of structure in the kidneys. Dr. Christison and Dr. Gregory, have also made valuable contributions in illustration of the subject, through Essays published in the Edinburgh Medical and Surgical Journal. Further scrutiny, however, is needful, and to furnish some facts towards its elucidation, is the immediate object of this paper. Were I seeking credit for myself, I would act wisely by withholding the following remarks until they should be more matured. I offer them thus early, however, not to satisfy enquiry, but to excite it; and, instead of waiting to extend my observations, and confirm my judgment and opinion, I incline to presenting thus crudely what I have learned, in order that while I pursue my researches, others may be induced to co-operate, and, by their combined endeavours, expedite the establishment of sound conclusions.

The mere fact of coagulability has hitherto been chiefly dwelt on, with but little precise reference either to the character of the coagulum formed, or to the quantity of albumen thus discharged. The changes, too, which take place in the urine in this respect, have been vaguely expressed, and the degrees of coagulability noted so as to be relative to the previous and subsequent urine of the same patient, but not to admit of exact comparison with other cases. These defects in observation were inevitable, and such as it required both time and experience to correct. Greater precision, however, must henceforward be exercised, in order to establish the facts with the distinctness and accuracy suited to their importance.

For several years I have been in the habit of noting the coagulability of the urine of dropsical patients. At first, my enquiries extended but little beyond the simple fact of the urine being coagulable; and so little connexion could I trace between this and the other symptoms, that, unable to deduce from it any conclusion applicable to practice, I was for a long time much less diligent in my observations than I ought to have been. At length, one modification of this state forced itself on my attention

so repeatedly and impressively, as to excite the deepest interest, and eventually to furnish ground for practical deductions which have afforded me some useful guidance. It is to this modification that I now mean more particularly to direct attention. Ere I proceed, however, some general remarks must be premised.

When small portions of urine are subjected to heat, the presence of albumen may, no doubt, be thus ascertained; but neither the peculiar character of this, nor its quantity, can be so ascertained. To exhibit these, larger portions must be tested, and the additional information, thus obtained, is too important to be passed over lightly. I have seen the whole urine coagulate into a solid mass, from which, after twenty-four hours, no fluid had separated. A marked distinction, too, is observable in the coagulum of urine under different conditions of disease. In broken down constitutions, where dropsy was connected with disease of the heart, and other visceral disorganizations, I have generally found the urine high coloured, and the albumen coagulated into a dark firm irregular globule. On the contrary, in dropsies attended with active inflammation, the albumen has been much more copious, diffused at first through the whole fluid, rendering it turbid and thick, and subsiding, by rest, in a whitish or pale yellow pulp, accomodating itself to the form of the containing vessel. Previously to the application of heat, this urine presents nothing to distinguish it from that which is healthy; nor would the albuminous combination be, on a cursory view, at all suspected. In the examination, I, at first, used a common phial, noting the degrees of coagulation by vague terms only. When the quantity of albumen thus passed arrested attention, I marked this relatively to the column of fluid, as being a quarter, one-half, three-fourths, &c. This mode, however, failing in precision, I adopted a half-pint measure glass, and was thus enabled to record the quantity of albuminous deposit in ounces and drachms. Beyond this I have not yet advanced, for though it is far from being an accurate measure of quantity, the density of the coagulum being variable, it is the only mode which the pressure of hospital duties has yet allowed me to employ. Greater accuracy would be attained by filtering the coagulated deposit, ascertaining its solid contents, and determining, by chemical tests, the actual quantity of albumen; but this, or any operose proceeding, would be quite incompatible with the duties which the medical attendants of the Bath United Hospital have to perform. A source of deception exists in the varying time required for the coagulum to subside. To obviate this, in some measure, I have, of late, ensured a certain time of rest, by having the urine subjected to heat in the evening, and left undisturbed until next day, giving, thus, from fifteen to twenty-four hours for subsidence.

The measure glass shews the proportion of albuminous deposit in a given quantity; but to ascertain the absolute quantity of albumen thus discharged, it is necessary to multiply the tested

portion by the number of pints of urine thus passed, and in this way it sometimes proves to be enormous. So considerable a discharge of a nutrient element cannot but be of the very first importance in all speculations respecting the nature or treatment of disease. Ere I venture on any further comments, I shall report an illustrative case, of recent occurrence, which I prefer to several antecedent; first, because it was more carefully observed, and more accurately noted—and secondly, because, independently of these considerations, it displays several circumstances calculated to throw light on the nature of this morbid condition.

Wm. Parker, aged 45, presented himself as a patient at the Bath United Hospital, on the 2d Nov. 1831. He had been ill a week; complained of general pains, more particularly in his lower limbs, which were swollen. The case was so obviously inflammatory, that he was ordered immediately to bed; was bled; had two cathartic pills, and a febrifuge mixture.

3d.—No buff; better in all respects. Con. mist.

4th.—Con. mist.; repetant. pil. cathart.

5th.—Acute pains of head. Cucurbit. nuchæ ad ℥xii.; con. mist.

6th.—Head relieved, and general feelings improved.

Attention was now more particularly called to the lower limbs, where œdema had increased. It was found to be considerable, extending upwards to the trunk; the abdomen full and tense; and the scrotum of considerable size, apparently from effusion into the tunica vaginalis.

Inflammatory action being abated, pills of blue pill and squill were ordered night and morning, and the saline continued. A lotion of nitrate of ammonia was applied to the scrotum.

7th.—Scrotum less; pergat. Urine to be examined by heat.

8th.—Copious coagulum. Pergat.

9th.—Much albumen; acute pains of head and chest. V. S. ad ℥xij. Con. med.

10th.—No buff; much relieved; swellings all reduced; gums tender; perg. sed. cap. pil. hora somni solummodo.

11th.—Much albumen, the coagulum being half the column of the urine examined; feels better. Pergat.

12th.—Mouth sore with salivation; some cough. Intermitt. pil. Mist. sal. scill. c opio.

13th.—Alb. $4\frac{1}{2}$ oz. in $7\frac{1}{2}$ oz. Perg.

14th.—Alb. 7 in 8.

15th.—Alb. 5 in 8.

16th.—Alb. 5 in 8.

17th.—Alb. 6 in 8. Continues to improve.

18th.—Alb. 7 in 8.

19th.—Alb. $5\frac{1}{2}$ in 8.

20th.—Out of bed: general improvement.

21st.—Much increase of urine, which had hitherto been scanty; passed 32 oz. in the last 24 hours. Alb. 5 in 8.

22nd.—Size of body reduced; measures $38\frac{3}{4}$ in circumference; ur. 30 oz.; alb. 4 in 8.

23rd.—Size $39\frac{3}{4}$; ur. 38; alb. 2 in 8. Bibat potum potass. supertartrat. ad lib.

24th.—Size $38\frac{1}{2}$; ur. 60; alb. 1 in 8.

25th.—Size $38\frac{1}{2}$; ur. 60; alb. 1 in 8.

26th.—Size $37\frac{1}{2}$; ur. 110; alb. $\frac{1}{2}$ oz. in 8.

27th.—Size $37\frac{1}{2}$; ur. 100; alb. $\frac{1}{4}$ oz. in 8.

28th.—Size $37\frac{1}{2}$; ur. 90; alb. none.

29th.—Size $36\frac{1}{2}$; ur. 100; alb. none.

30th.—Size $35\frac{1}{2}$; ur. 140; alb. none.

Dec. 1st.—Size $35\frac{1}{2}$; ur. 120; alb. none.

2nd.—Size $34\frac{1}{2}$; ur. 130; alb. none.

3rd.—Size $33\frac{1}{2}$; ur. 130.

4th.—Size $33\frac{1}{2}$; ur. 110.

5th.—Size $33\frac{1}{2}$; ur. 100.

6th.—Size $33\frac{1}{4}$; ur. 100.

7th.—Size $33\frac{1}{2}$; ur. 90.

8th.—Size $32\frac{1}{2}$; ur. 100. Some return of head-ache. Haust. cathart.

9th.—Size 33; ur. 80. Head-ache continues; tongue white and furred. Cucurb. nuchæ ad ℥xij.

10th.—Head relieved; size 33; ur. 72.

11th.—Size $32\frac{1}{2}$; ur. 96.

12th.—Still some head-ache. Vesic nuchæ.

13th.—Head relieved; was now free from all complaint, and on the 16th, discharged well.

The foregoing case, though not to be regarded as in any respect singular or extraordinary, furnishes matter for much reflection.

The inflammatory character of the disease is sufficiently obvious. Although the blood was not buffy, all the attendant symptoms were characteristic of inflammatory action. It was almost the only case of the kind in which I have not found the blood both buffy and cupped.

It seems difficult to regard the albuminous discharge otherwise than as a corrective effort of the constitution, for removing redundancy, and restoring a healthy balance to the constituents of the circulating fluid. During the copious secretion of albumen, disease progressively declined, recovery advanced as the secretion diminished, and when this ceased to appear, very little disease remained. The urine was repeatedly examined after the record was discontinued, but the slightest cloud never appeared; a few days after the albuminous discharge had ceased, I allowed some animal food, watching the urine with some anxiety, but it continued unchanged. To this point I shall have occasion to advert again, ere I conclude.

The quantity of albuminous deposit merits regard, and it is interesting to mark the progression of its absolute decrease, under the variations of quantity in the urine itself. Calculating the

whole albuman passed each day, and commencing with the day when increase of urinary secretion was first noted, the following view is presented :—

	DRACHMS.
Nov. 21,—Total Albuman, ...	160
22, ...	120
23, ...	76
24, ...	60
25, ...	60
26, ...	55
27, ...	25
28, ...	none.

There is another view to be taken of this state of the urine, which seems to me of no slight importance. It seems to afford a valuable criterion for the more precise adaptation of curative means. In administering remedies, our object is to excite certain natural powers, by the energies of which, disease is corrected. It continually happens that this excitement is urged too far, from want of some criterion by which to judge of its being carried far enough. Many suffer by the abuse of mercury, who would benefit essentially by its use. Now in the disease under consideration, the state of the urine furnishes a valuable guidance in this respect. In general, the decline of dropsical swellings is not so rapid or decisive as to furnish a perfect criterion of when mercurial excitement ceases to be necessary, and I suspect that this is often urged too far; but when decline of swelling is viewed in connexion with increased diuresis and progressive diminution of albumen, we have, in the collective evidences, full assurance that the natural powers are sufficiently active, and need not extraordinary excitement; and that to urge mercury further, is here not only needless, but very likely to do harm. This patient was bled, cupped, and purged. He took blue pill to salivation. Almost all medicine was afterwards withdrawn, for his bowels acted freely, urine was abundant, and there was no special induction to call for medicine, save a slight cough, which a pectoral mixture, with squill and paregoric, quickly relieved. For the latter periods he took nothing in the form of medicine, save the cream of tartar solution for his common beverage. The concurrent evidences satisfied me that the restorative energies of the system were sufficiently active, and I abstained from interference. I believe that I was right, and that if, with a view to accelerate and procure more rapid reduction of dropsical swellings, I had continued the use of medicines more actively, I should have exhausted power unnecessarily, and have done harm. The principle is worth bearing in mind, and such evidence as the state of the urine affords in this species of dropsy is of value on this account, independently of all other considerations.

Attention to this point is the more important, if, as I have some reason to believe, a continuance of mercurial excitement is

capable of reproducing the albuminous secretion, and of changing the active into a passive discharge. A case which I have still in the hospital, affords some illustrations of this point.

Mary Andow, aged 45, became a patient of the Bath United Hospital, on the 27th April, 1832, for dropsical swellings of face and lower limbs, attended with head-ache and preceded by cough. She had been ill for six months.

The disease was inflammatory, and by bloodletting, with other suitable treatment, she was relieved of all her complaints in about five weeks, having been discharged on the 5th of June. The urine had exhibited albumen, often to the extent of more than half its volume.

On the 17th Dec. she applied for re-admission, under symptoms which evinced a tendency to paralytic seizure, there being manifestations of depraved sensation, with pains of head and a quick and hard pulse. There was slight swelling of the legs; urine was scanty, and the bowels were confined. In the course of the same day she experienced sudden loss of power in one arm; and on the 19th she became, once more, an in-patient of the hospital. Bleeding and febrifuge treatment, with diuretics, were employed with effect, and she progressively improved. Acute pains of back induced me to cup over the kidneys, which gave prompt relief. Return of pain requiring me to cup a second time, I became suspicious of some lurking inflammation, and resorted again to mild doses of mercury; but in a few days the albumen in the urine, which had nearly disappeared, returned in considerable quantity, and daily increased. Induced, by circumstances, to attribute this renewed secretion of albumen to the mercurial excitement, rather than to the activity of disease, I withdrew the mercury, and the result answered my expectations, for the albumen again declined, and in a short time disappeared.

I was once more indebted to the indications supplied by the urine, in this case, for useful guidance.

The woman's weakly state had induced me, occasionally, to make trial of animal food, with a view to recruit her powers; but renewal of inflammatory action soon warned me to desist. At length, when all inflammation seemed at an end, and the urine was free from albumen, I again allowed some meat. But she had only taken it twice when the urine again presented an albuminous deposit. The meat was withdrawn, and on the following day the urine was nearly opalescent, but without any precipitate; and on the day after it was again quite clear.

It appears to me that, on the two latter occasions of the albumen re-appearing, the morbid condition of the secerning vessels was different from that which had originally produced this secretion; that it was passive rather than active; the result of relaxed capillaries rather than of inflammatory action; that the removal of secretion was owing, in one instance, to the excitement of mercury—in the other, to that of animal food; and that to have continued either excitement, under this evidence of their

effects, would have been injurious. Yet it was solely to the evidence furnished by the urine that I was indebted for guidance, for there was no other to warn me so early of the mischief occasioned. In this view, the albuminous secretion of such cases appears to undergo changes analogous to those of hæmorrhage in its active and passive states, and, if so, much discrimination will be needed in deciding on the morbid condition actually present, for the treatment applicable to the active stage could not fail to do harm, if applied or continued when that stage had ceased to prevail. I am sensible that the foregoing remarks are all very crude; but I am anxious to multiply observers, and to induce others to prosecute an enquiry which, so far as I have been able to pursue it, has proved to me both interesting and instructive.

To prevent misconception, I wish it to be distinctly understood that, in what is advanced in the foregoing pages, I mean not to impugn, in the slightest degree, the observations or conclusions of Dr. Bright. The labours of Dr. Bright, in this respect, possess intrinsic merit, and are justly appreciated by the profession. So far as they extend they have been most successful in establishing a connexion between coagulable urine and structural disease of the kidney. That this is true I fully believe; but this is not the whole truth. I believe that a modification of this state of urine exists, to which Dr. Bright's investigations do not apply; that this is connected with general inflammatory action; that the disturbance of the kidneys, which produces it, is merely functional; and that in this form of disease, at least, organic lesion of the kidney is not to be necessarily inferred from the mere presence of albumen in the urine. If what I have stated in this paper, lead to more extended enquiry, and to greater accuracy in observing and noting the character and properties of coagulable urine, and its connexion with morbid action or structure, my purpose in writing it will be answered. If there be any foundation for my surmise, it must be important to establish the fact, for great and injurious alarm must prevail in every case of coagulable urine, if the mere presence of albumen were to be regarded as denoting organic lesion.

The generality of this connexion seems amply proved by the evidences adduced by Dr. Bright, confirmed, as they are, by the testimony of Dr. Christison and Dr. Gregory. Yet, even in the class of diseases on which their observations were made, exceptions to the general rule present themselves; one such lately occurred to me; and it was with feelings of disappointment that, in a case in which I confidently expected to find a specimen of the organic change so distinctly represented in Dr. Bright's splendid plates, no structural lesion was discoverable. This case I shall state very briefly.

A poor man, named Clarke, was admitted to the Bath United Hospital about two years ago, for inveterate jaundice, attended with general dropsy. Contrary to all expectation, his diseases were removed, and he was enabled to resume his employment.

A few months back, he returned to me with renewal of dropsy, but free from jaundice. There was now, however, great disturbance of the chest, with cough, dyspnœa, inordinate action of the heart, and clear evidences of this being greatly enlarged. The urine was scanty and high coloured, and when subjected to heat, a solid dark-coloured coagulum was formed, of irregular surface, about the size of a walnut, being separated from six ounces of urine. Examination of the urine was not repeated, for the case was hopeless, and no useful guidance was expected from this source. The man died, and on the 19th Dec. the body was carefully examined by a most accurate anatomist, my friend, Mr. Gore. His detailed report of the dissection would be too long for this place, I shall therefore confine myself to the points more immediately connected with the subject. "The heart was very much enlarged, and extended almost transversely across the thorax, its apex being in contact with the seventh rib on the left side, and the right auricle reaching within two inches of the parietes of the chest on the right." The liver was of a dull mottled-brown colour, and of considerable size.

"The kidneys were large, firm, smooth on their outer surface, and much loaded, externally, with dark-coloured blood; with this exception, however, their appearance was peculiarly healthy."

Such was the report which I received of this dissection, which furnishes one instance where coagulable urine was not connected with structural disease of the kidney. On this solitary case I would lay no stress, for, though it is opposed to the universality of the connexion so ably traced by Dr. Bright, it leaves the general truth of his ingenious and interesting investigation untouched.*

In pursuing this research, it is necessary to bear in mind that, while the affirmative of Dr. Bright's position admits of ready and frequent proof, the negative is not so demonstrable, as recovery precludes anatomical examination, and we have no other conclusive evidences by which to know the actual condition of the kidneys. It has been aptly remarked, that recovery, or disappearance of the albumen, furnishes no certain proof of the kidneys being sound, for that the former may be imperfect, the latter but temporary, and that the party, though for a while relieved, may ultimately become the victim of the structural lesion. I know of no means for supplying evidence on this point, except the tedious one of watching cases of recovery, and ascertaining their state of health at distant periods. This I have endeavoured to do, so far as my opportunities allowed, and, as yet, I have seen no room to doubt the recovery of the acute cases to which this paper principally relates, being otherwise than permanent.

* I have a very accurate drawing of Clarke's kidney, made by my ingenious friend, Dr. Greville, which exhibits the appearance both of its outer surface and internal structure, but, as it serves only to prove a negative, I deem it unnecessary to trouble you with it.

One of the most remarkable cases of this kind that I have met with, occurred in a patient who was admitted to the Bath United Hospital, on the 29th May, 1830. The disease was most acute; the œdema vast and extensive; the treatment active; and the albumen so abundant, that the urine, when first examined by heat, coagulated into a solid mass. By blood-letting, purging, mercury, diuretics, with other remedies, the case proceeded favourably, and the man was discharged, well, on the 13th July, having been in the hospital about six weeks. This man returned to his laborious occupation of a day labourer, in which he has continued ever since. I have made repeated enquiries respecting him, and have ascertained that, up to a very late period, he remained in perfect health. This could hardly have been the case, if structural disease of kidneys, such as is displayed in Dr. Bright's plates, was here existent.

Of the imperfections of the present hasty sketch, I am fully sensible. It may suffice, however, to direct attention to an important subject, and furnish some guidance to those who may be disposed to pursue the investigation. What I have stated, furnishes some evidence, I think, of there being a diseased condition of the frame, attended with albuminous urine, which differs from the class from which Dr. Bright's conclusions have been drawn, and that this modification claims further scrutiny, no less on its own account, than from the necessity of establishing some diagnosis by which it may be distinguished from the more fatal form of disease.

I wish to mention, that I have had the urine repeatedly examined in common inflammatory complaints, with a view to ascertain whether the presence of albumen was ever attendant; but, as yet, I have not found it, except in cases marked by more or less of dropsical effusion. There seems, then, a close connexion to subsist between the secretion of albumen by the kidneys, and that condition of the blood-vessels which tends to serous effusion, more particularly when this takes place into the cellular membrane.

ARTICLE III.

Physiological Remarks on the state of the Economy at the termination of acute disease.

BY LANGSTEN PARKER, BIRMINGHAM.

The termination of all local diseases, of an inflammatory character, which are of sufficient violence to call forth the sympathies of the more important organs of the economy, as the heart, skin, stomach and brain, is marked by a change in the mode of action of the vascular and nervous systems; the balance of power, which disease had destroyed, is restored, and the due dependence, which the functions of different organs have upon each other, is again resumed. This change, from disease to

health, is accompanied by symptoms as unequivocal as those which marked the decadence from health to disease, though they are modified by the temperament of the individual, and the nature of the organ in which the disease is seated, in the same manner that the pre-existing malady derived the peculiarities of its nature and treatment from causes of a similar kind. To this state the term convalescence is, by general consent, applied. When disease is completely removed the period of convalescence commences, and as, on the one hand, it is difficult to ascertain the point at which health terminates in disease, so, on the other, it is a matter not less arduous, and more important, to observe the period when the state of disease merges in the condition of health. The period of convalescence intervenes between the complete termination of disease, and the perfect re-establishment of health, so that we have a certain time during which disease is absent, and health not perfectly established. This period is extremely critical, and requires not less the attention of practitioners than that marked by the symptoms of acute disease, varying, in its duration, from a few days to weeks and months. Inflammatory diseases are all primitively local, and only become general from the excitement of the sympathies in other organs of a character similar to the original or primitive disease. These sympathies may, in themselves, become the centres of disease, eliciting new symptoms, and rendering the affection more general, complicated, and dangerous. The number and extent of these sympathies, with their degree of violence, are regulated, in all instances, by the susceptibility of the individual, and the preponderance of activity in the vascular and nervous systems. In the latter instance, the sympathies will be more varied and puzzling; in the former, most violent and dangerous. The first being of the greatest importance, threatening the destruction of the organs in which they are seated; the second seeming most alarming, whilst in reality the danger is chiefly in appearance. At the termination of an acute disease, we find the organ which was primitively the seat of such disease, or that whose sympathies have rendered it of the most importance during the continuance of disease, from the activity with which they have been exercised, still retaining an increase of susceptibility or excitability. This excitability, of which each organ in the natural state possesses its just proportion, is exalted in the convalescent organ, to an extent proportionate to the pre-existing degree of disease, and the remaining organs are debilitated in a direct ratio to the increase of excitability in one. The susceptibility to be acted upon, remains without the actual existence of disease. The debility results from the derangement in the functions of the vascular and nervous systems, the loss of fibrine in the blood, and the want of energy in the functions of the nervous system, dependant upon the activity of the circulation of the former.

The physiological condition of the great or general systems of the economy at the termination of acute diseases should not

be overlooked, since they furnish us with important data upon which to found indications of cure. These systems are the vascular and the nervous. The blood is deteriorated, from the arrest of the nutrient functions, and the total stop which is put to the actions of this order of parts, during the existence of all inflammatory disease, whether acute or chronic. The treatment adopted for the cure of acute disease, likewise materially influences the deterioration of the circulating medium favouring the increase of the thinner parts of this fluid, at the expense of the fibrinous or nutritive portions. Hence the feeble stimulus which the heart and arteries receive; the muscular debility, and the want of energy, which characterises the circulation at the period under consideration.

An important change has likewise taken place in the functions of the nervous system. What this system has lost in force or tone, it has gained in sensibility. Its actions are characterised by manifest debility, whilst, at the same time, the susceptibility to impression is increased in a ten-fold degree. A feeble light fatigues the eye, low or indistinct sounds offend the ear, the skin is chilled by a moderate temperature, and syncope frequently produced by strong odours or perfumes. This increased sensibility, though attended by evident weakness, likewise pervades all parts of the economy—the heart, lungs, stomach, &c. which can only be influenced through the medium of this system.

The exaltation of one property of this system, to the diminution of another, is the natural consequence of the deterioration in the composition of the blood, and invariably succeeds, in a greater or less degree, the attacks of acute disease. It is more common in females than males, and more frequent in those of the latter class, who are characterised by the habitual liability to impression which this system manifests; in those, whose temperament is evidently nervous. The increased sensibility of the nervous system, at the termination of acute diseases, is always strictly proportionate to the diminution of the actions of the vascular system, so that the equilibrium of the general systems is destroyed, as well as that relation existing between single organs. This then is the state of the economy at the commencement of convalescence, when disease has actually disappeared, and the disorder, consequent upon the loss of equilibrium, is left to nature and art to restore.

The organs which excite the most varied and important sympathies, and which, being inflamed, produce the greatest derangement in the economy, are the heart, lungs, brain and stomach, with their investing and lining membranes. The sympathies of acute diseases are manifested by local pains in important organs, by the diminution of the secretions, augmentation of heat, acceleration of pulse, and other symptoms which are peculiar to the organ in which the affection happens to be seated; and it is upon the diminution or cessation of these, that the opinion of cure, or the state of convalescence is founded.

Two circumstances may form obstacles to the progress of the state of convalescence towards the complete restoration of health: the continuance of the state of debility, to which the patient has been reduced by the disease,—and a return of the disease. In the first instance, though no disease actually remain, and the state of convalescence be real and not apparent, the individual may be placed in a situation unfavourable to the recovery of strength. The functions of the body are only continued by the action of stimuli upon the organs exercising them, and if these stimuli be not furnished to the debilitated organs, in a modified and healthy form, the state of convalescence will soon relapse into that of disease. The atmosphere in which the convalescent lives, should be of a moderate temperature, and frequently renewed. The food should be easy of digestion, and given in small quantities at repeated intervals. The tonics should be of the lightest kind. The clothing rather warmer than during health. If the head has been the seat of the affection, all strong impressions upon the senses should be carefully avoided. Excessive light should be excluded from the apartment. The natural stimulants of sound and smell should be reduced to a degree proportionate to the condition of the patient. All sudden impressions upon the brain, which the influence of moral causes might produce, are here to be guarded against, equally as in the case of previous inflammatory disease of the heart and pericardium. Supposing the stomach and lungs to have been the seats of this disease, the food should be of the farinaceous kind, and the temperature of the apartment should be elevated and regular. If, under the use of these precautions, the patient does not gain strength, we may fairly presume that the convalescence is not real but apparent, and the disease is not removed, but merely palliated. We must now proceed to interrogate the state of the different functions, and here, in most instances, we shall find a total variation in the symptoms, though the disease has not changed its seat, but its degree, having merely passed from the acute to the chronic state; and, indeed, in many of these instances there is, apparently, a perfect convalescence for a short period, in which the functions are performed with due and accustomed regularity; but, at the end of a few days, or longer, the state of the patient is not much improved; the pulse, instead of the softness of health, is quicker, and, therefore, harder than natural, though all the other functions are healthily performed. One single symptom will frequently remain, whilst the others have all disappeared. The state of the skin and pulse are the best criteria of perfect convalescence in these cases; and profuse perspirations, or accelerated pulse, will furnish indications, though singly met with, of the continuance of the disease in the chronic form, when every other morbid symptom has disappeared. Either of these, in conjunction with the continuance of the general debility, even in a more mitigated form, may be depended upon as certain signs of false convalescence. The

state of relapse, retarding convalescence, may exist in two ways: first,—as a return of the disease, in the chronic form, in the organ which has primitively been the seat of inflammation, or in that in which the sympathies have been most marked, as in phthisis succeeding catarrh or pleuritis;—or mesenteric disease following acute or sub-acute enteritis.

The state of disease, from relapse, is always under a modified form, and, consequently, extremely deceptive as to its true character, the disease always putting on the sub-acute or chronic form. In these instances there may be, at first, no degree of pain in the organ which has been the seat of acute pain; the pulse is accelerated; the body wastes; palpitations are frequent; the tongue large, flabby, moist and white, though not coated; perspirations are profuse; the appetite variable; and digestion accompanied by flatulence, pain, and diarhœa: sleep is unnatural, and frequently altogether absent. It is not my purpose to trace the phenomena of organic disease, of which these symptoms are, in most instances, the commencement, but merely to notice the passage from its acute to its chronic form; acute inflammation, in most instances, being the origin of that chronic form of disease which changes the structure of parts, and ultimately conducts the patient to the tomb. The state of relapse is worse than that of the primitive disease, from two causes likewise: first,—the debilitated state of the patient prevents the adoption of remedies for the removal of the disease, except with extreme caution; and, secondly,—the sub-acute, or chronic inflammation, is an affection of a different nature from the primitive one, in the order of parts which the disease affects. The first of these propositions needs no comment. The second includes the whole range of the pathology of chronic diseases.

Irritation,* which must be supposed to be the forerunner of all acute disease, will act in a two-fold manner, according to the preponderance of sanguineous or serous capillaries in the tissue or organ in which it is seated. The first effect of irritation, is to determine towards the part irritated, an increased quantity of fluids, the nature of these fluids being regulated by individual constitution and the structure of such part; if it be sanguine, i. e. if the capillaries carrying red blood predominate in it, and this fluid be rich and fibrinous, sanguineous congestion will take place, and acute inflammation will follow. If the part contain serous or lymphatic vessels only, or if the capillaries, which carry the thinner or serous portions of the blood, principally abound, as they do in all the organs of persons of the temperament termed serous or lymphatic, and in certain organs of persons of the

* I would not have it understood that I use the term irritation in the Abernethian acceptation of the term, but in the sense of Broussais and the writers of the physiologic school. I consider it as a primitive morbid state, in which the vital action is increased beyond the degree necessary for the continuance of the integrity of the functions and structure of the organs it may affect.

opposite or sanguineous temperament; the congestion of lymphatic, albuminous, or serous fluid, will succeed the irritation and the inflammatory action will be of the chronic or subacute character. It is the nature of the fluids predominating in the part excited, which determines the character of inflammations, since the red fluids never exist in a part, to the utter exclusion of the white, nor the latter to the exclusion of the former, except in a very few structures, as the conjunctiva, &c. &c. and here a slight degree of excitement is sufficient to admit a considerable portion of red blood. Whether the capillaries, carrying the thinner fluids, be provided with a degree of vitality less than those which circulate the fibrinous and more nutritious portions, dependant for this upon the lesser vitality or stimulating property of the fluids they contain, (which is most likely,) certain it is that inflammations, seated in parts and constitutions where these vessels preponderate, are less easily excited, continue for a longer time without disorganization, but are with greater difficulty removed, and are too apt, in spite of the most judicious treatment, to produce change of structure which admits of no resolution. This, then, is precisely the state of the system at the termination of acute inflammation. If the patient has been previously of a sanguine constitution, he is now characterized by the phenomena of a lymphatic or serous one, though the danger of chronic disease from relapse is here less to be dreaded, since the proportion of fibrine in the blood is speedily restored. The lymphatic constitution presents the greatest obstacles to perfect convalescence, as the functions of the system are naturally so languid, the period of convalescence so much lengthened, and consequently the risk of a return of the disease under a chronic form, so much increased. The period of convalescence should be closely watched, and every shade of inflammatory action, if possible, eradicated, since the remains of a trivial degree of the complaint may act as a nucleus of irritation, determining a fresh supply of fluids towards the part. The patient should not be considered cured, when all the more active symptoms have disappeared. The disease may be merely palliated, it may exist under a chronic form. To determine this the state of all the functions must be reviewed, and particularly those of nutrition, they will best determine the true state of the disease. With regard to the treatment of the convalescent. If the condition of the general system, and the relative state of the various organs be borne in mind, it must be founded on the only true data. The vascular system acts feebly, from the diminution of the fibrinous portion of the blood, and the preponderance of the thinner fluids, which afford a less stimulus to the heart and arteries. The nervous system loses its tonicity or force of action from the same cause, but the sensibility or liability to the reception of impressions is increased. The diseased organ still possesses an increased excitability, and this in a direct ratio to the weakness of the remaining organs of the economy. The indications of cure are, consequently, to

restore the equilibrium of the general system, by favouring the renewal of the fibrine of the blood, and to restore the tone of the single organs, without increasing the excitability of the one previously diseased.

ARTICLE IV.

Observations on Cataract.

(Arranged for a Clinical Lecture.)

BY MR. MIDDLEMORE,

Assistant Surgeon to the Birmingham Eye Infirmary.

The patient upon whom I operated for cataract a few weeks ago, is now just discharged with very good vision ; her name is Susannah Butler, and she is 65 years old. She was, at the time of operation, in a state of good health, being neither very plethoric nor much emaciated ; and we were informed by herself that she had never suffered from either gout or rheumatism. There was a hard lenticular cataract, of a brown colour, in the right eye, and a capsulæ-lenticular cataract, of an equally firm consistence, in the left eye. This case was rather, but not a very, favourable one for the operation of extraction ; it was favourable as regards the healthy state of her constitution, and the goodness of her habit of body ; it was an unfavourable one, inasmuch as the eye was deeply sunk in the orbit, the cornea very small, and the iris unusually near to the cornea. I performed the operation of extraction upon each eye, making the incision of the cornea downwards in the left, and upwards in the right eye ; and in both organs the operation was remarkably successful ; so that it requires a close examination to discover that any operation has been performed. This person remained in the infirmary a month, when she was discharged with very good vision, and directed to call in a week for cataract glasses.

Before performing an operation for cataract, it is advisable, in some cases, to place the patient under what is termed a course of preparative treatment, whenever there are indications of disordered health, or when the habit of body is very plethoric, or remarkably enfeebled, but, as this woman was in good health, and was not either very plethoric or remarkably enfeebled, I did not deem it necessary to prescribe for her any thing more than a little aperient medicine prior to performing the operation upon her eyes.

With regard to the selection of the operation of extraction in this case, I cannot enter upon the respective merits of the various operations, which are usually performed for the cure of cataract, but I am always in the habit of preferring extraction to every other, when the eye-ball is healthy, and not too deeply situated in the orbit, when the cataract is hard, the cornea and anterior

chamber of their due size, and the patient not remarkably feeble. And in reference to the upper or lower section, I am in the habit of making the lower section of the cornea in the left eye, and the upper section in the right eye, merely because I can then use my right hand in the management of the cataract knife, and I do not know that there is any sufficient difference as respects the result of operations, in my own practice, to induce me to give a preference to, on that ground merely, either the upper or the lower section of the cornea. The after-treatment of the case was remarkably simple, it consisted in placing a narrow piece of damp linen upon the closed eye-lids, and retaining it there by means of a roller passed lightly two or three times round the head. This was removed every day for about a week, and on each occasion a similar bandage was again applied. At the end of this period, she used, merely, a four-stringed bandage, which consists of a square piece of doubled linen, just large enough to pass across the upper part of the face, a piece of tape being attached to each of its four corners, by means of which it is secured in its situation. In this way you can exclude the light to a great extent, without at all pressing upon the eye-lids. In a few days this bandage was exchanged for a thin piece of dark-coloured pasteboard, cut into the form of a common shade.

During the treatment she took a little aperient medicine, and twice a day (beginning three days after the operation, and continuing its use for a week) she had two grains of the sulphate of quina; she had also at some period during the progress of the case, two blisters at the back of the neck. Nothing could be more simple or less active than this treatment, and the very successful termination of the case, proves that nothing more was very urgently required, but it would be wrong to infer that such simple treatment would be all that would, in every case, or even in the majority of cases, be demanded; that, of course, will depend on the constitutional condition of the patient, the extent of the injury inflicted upon the eye at the time of the operation, and the nature of the symptoms which may supervene upon its performance. The relation of the outlines of this case leads me to say a few words respecting the mode of examining patients affected with cataract, with a view to ascertain the actual condition of the eye, and its state in reference to surrounding parts, and the method of enquiry it would be necessary to adopt, in order to arrive at a knowledge of the present and past state of the patient's constitutional health. And first, as to the circumstances it might be necessary to attend to, in regard to the situation of the eye in the orbit. The eye may be more or less deeply sunk in the orbit, and, if it be very deeply situated in the orbit, you would not think of performing the operation of extraction, for in such case, it would be impossible to pass the cataract knife across the chambers of the eye, and, indeed, almost impossible to transfix the cornea, without injuring the iris. And, further, the lids may be the seat of certain diseases, which would forbid

the performance of this operation, at least, until they were removed or materially relieved; such, for instance, as tinea, lippitudo, hordeolum, entropion, ectropion, tumours, and so on.

2.—Then in examining the eye, it is necessary to look at the eye-ball as a whole; to observe whether or not there is any ophthalmia present, and particularly whether the eye-ball is harder or softer than it ought to be; whether it is in a state of hypertrophy or atrophy, or in a condition of perfect health. If any external ophthalmia be present, of course it ought to be removed prior to the performance of an operation; if the eye-ball were unusually hard, that circumstance would generally denote inflammation of its posterior parts, or the existence of glaucoma; and if, on the contrary, it were remarkably soft, the eye would very probably be unfit for the purposes of vision, even if the cataract were taken away.

You next examine the cornea, and the chief points for notice are its size, its degree of convexity and transparency. If the cornea be more or less opaque, it would be desirable to remove such opacity before undertaking an operation; or, if that cannot be accomplished, you must either modify the operation of extraction agreeably to the extent and site of the opacity, or else perform some other for the cure of the cataract. If the cornea be very small, the lens will not readily escape, and it would not be right to incur the risque of that danger, which the forcible transmission of a lens too small to permit its facile transit, would be likely to occasion.

You will notice whether or not the iris is healthy, and whether it is at a due distance from the cornea; for an ample anterior chamber is a matter of great importance, inasmuch as it renders the iris less liable to be injured during the passage of the knife across it, than when it is situated very near to the cornea; and then, with regard to the motions of the iris, you will test them, first, by exposing the eye to various degrees of light alone; and then in conjunction with that of the opposite eye, (which I am supposing to be healthy,) and under the same circumstances; for, it ought to retain its associated motions with the opposite iris, even though its associated motion with the retina of the same side, is lost. And let me here remark that, unless your patient can distinguish a strong from a weak light, and observe a shadow pass before the eye when the hand is drawn between it and a bright light, the retina is very probably in an unfavourable state for the purposes of vision, unless, indeed, the lens be unusually thick and densely opaque; of course, if combined with this total insensibility to light, the patient complained of scintillations or muscæ volitantes, you would be led to suspect very strongly the existence of amaurosis.

Well, having examined the state of the eye-ball in reference to its more or less deep situation in the orbit, and the condition of the palpebræ; having investigated the state of the globe in reference to its grade of vascularity, its magnitude, and its

degree of firmness; and having observed the characters of the cornea as relates to its magnitude, its transparency, and its degree of convexity; and, lastly, having enquired into the following circumstances connected with the iris, namely, the healthiness of its appearances, its distance from the cornea, the retention or otherwise of its associated motions with the iris of the opposite eye, and its possession of, or otherwise, its associated motion with the retina of the same side, and also into the state of vision under the circumstances already pointed out, and the existence or otherwise of any amaurotic symptoms, and, if any, their nature and extent, it would only be necessary to make certain enquiries concerning the constitutional condition of your patient. A state of great plethora, or a condition of extreme weakness, is unfavourable to the result of an operation for extraction, the former by inducing a tendency to inflammation, and the latter by retarding or preventing the union of the corneal flap, or causing it to slough. In very old and feeble persons, or old persons, the quality of whose diet is suddenly much lowered, the corneal flap is apt to slough, and very rarely indeed unites properly; but the union which does occur, takes place through the medium of a deposition which becomes organized, and furnishes a medium of connexion between its cut surfaces; and an acquaintance with this fact is of the highest importance, in relation to the after-treatment of such individuals. Gouty and rheumatic persons are usually phrased unfavourable subjects upon whom to perform the operation of extraction; for the injury produced by the measures necessary for the removal of the lens, is apt to give rise to arthritic or rheumatic inflammation of the eye.

A well-known physician was lately operated upon by a most skilful surgeon, and his sight was destroyed by the occurrence of arthritic inflammation, to which he had been a good deal subject in various parts of the body, on many former occasions. A deranged state of the general health, and particularly of the stomach and bowels, is another source of either an increase of the inflammation of the eye, which always succeeds this operation, or, of interruption to the due union of the cornea. An irritable state of the system, by disposing the muscles of the globe to become spasmodic in their action, is also unfavourable to the successful result of an operation of this nature. And, lastly, asthma, or the existence of a severe cough, will of course diminish the chances of success, chiefly by causing a forcible injection of the vessels of the eye, by suddenly interrupting the return of the blood from the head.

These are some of the many circumstances concerning which it would be necessary for you to make due enquiry when examining a patient affected with cataract, with a view of deciding the probability of the restoration of sight, and determining the propriety of an operation, and deciding upon its nature. But, you must also direct your attention to the cataract itself, and be enabled to state, from your examination, whether it is capsular

or lenticular, or both, and if capsular, whether the opacity be seated in the anterior or the posterior capsule, the extent of the opacity, its degree of consistence, its colour, its density, its distance from the iris, and so on; to all these questions you should be enabled to furnish a tolerably correct reply, and not rest content with declaring what the patient well knew before he applied for your assistance, that he is suffering from cataract. I am sure that, unless you conduct your examination according to some arrangement of this description, you will fail in your attempts to elicit that extent of information, which it is your duty, as well as the object of your examination, to obtain, and which it is so very necessary to possess, before deciding upon the performance of an operation, and determining upon the nature of that operation.

Having said thus much concerning the examination of the cataractous individual, I proceed to speak more fully of 1. The preparatory treatment for the operation of extraction;—2. The adaptation of the operation to particular cases, which adaptation will of course be directed by the previous examination;—3. The best instruments for performing the operation;—4. The arrangement and position of the patient for operation;—5. To describe the different steps of the operation;—6. To discuss the propriety of operating upon one eye only, or upon both at the same time, on the same day.—7. The time, as regards the present condition of vision, at which an operation should be performed;—8. To point out the best method of dressing up the patient afterwards;—9. To explain the mode in which the cornea heals;—10. The accidents which are most likely to take place, and to the prevention of which, treatment should be directed;—11. The various measures it may be necessary to adopt, subsequent to the operation, usually comprehended under the term after-treatment;—12. The various conditions of the eye after operation, in successful and unsuccessful cases;—13. The use of spectacles, and the method of adapting them to particular cases, and the rules it may be necessary to enjoin the observance of, with regard to their use.*

* On account of the length of this Lecture, I have not sent you my notes of any of the thirteen heads into which the latter part of it is divided.—R. M.

ARTICLE V.

Remarks upon the causes, and means of prevention, of Epidemic Diseases, in which the Doctrines on Contagion are briefly considered.

BY MR. ADDISON, F. L. S.

Surgeon to Her Royal Highness the Duchess of Kent, Malvern.

When we investigate the phenomena promoting, or necessary to, the existence of epidemic or contagious diseases, we observe a broad line of demarcation to be drawn between those which are *extrinsic*, depending upon some atmospheric miasm, offensive effluvia or malaria, or contagious emanation: and those which we may term *intrinsic*—some peculiar predisposing condition of the human frame, without which, every external and otherwise injurious influence, passes off harmless and without effect.

Our knowledge of the intrinsic circumstances, or corporeal condition, favourable to the occurrence of disease, must necessarily be very imperfect, and will, probably, from the nature and complexity of the operations of the animal frame, ever remain so. The delicate and wonderful details of vitality are too deeply hidden from our view, for us to cherish the idea of an acquaintance with those minute functional peculiarities constituting the intrinsic or predisposing causes of disease, and however interesting or desirable an investigation into these topics may be, I doubt whether, in a practical point of view, an accurate knowledge of the extrinsic or external exciting causes is not of more value, not only as it is more readily to be obtained, but because it will often lead to important results, towards arresting the progress of a malignant and mortal disease.

Having, recently, given publicity to my views regarding the extrinsic causes favourable to the propagation of cholera, and shewn the powerful influence exerted by terrestrial radiation, in promoting, at night, local specific temperatures, and local specific atmospheres; having also proposed the burning of large fires during the night in districts affected with cholera, or other disease resulting from malaria, and fully explained the principle upon which their beneficial agency is to be expected, I shall, on the present occasion, confine myself to the statement of some additional facts and observations tending to confirm and strengthen the opinions I have promulgated.

It is instructive to observe the expedients which experience may lead us to adopt, in order to prevent some impending evil or attain some desirable end; and curious to learn the speculations entertained regarding their efficacy and modus operandi, when the principle, which should guide us in their use and appropriate application, remains undetected. An illustration of this remark may be found in the occasional resort to fires in districts liable to malaria; an expedient which fortuitous expe-

rience, on several occasions, had exhibited in a remarkable manner to be very beneficial; but the knowledge which should have guided their application not having been obtained, the speculations respecting their purifying and rarifying effect were, generally, erroneous or unfounded, and the ridicule sometimes cast upon their influence, as a protection from disease, little warranted, when the facts, which although ill understood, remain undisputed and without refutation.

In the communication previously referred to, several instances are brought together in which fires were found to be great preservatives against injurious atmospheric effluvia; and the following, taken from De Foe's History of the Plague, exhibits the recourse had to them at that period, but whether they were burning during the day or the night, or allowed to remain lighted the twenty-four hours, I have been unable to ascertain:

"Without coals the city would have been greatly distressed; for not in the streets only, but in private houses and families, great quantities were then burnt, even all the summer long, and when the weather was hottest, which was done by the advice of the physicians. And I must confess I think, with good reason, and the experience of the citizens confirmed it, many houses which had constant fires kept in the rooms having never been infected at all; and I must join my experience to it, for I found the keeping of good fires kept our rooms sweet and wholesome, and, I do verily believe, made our whole family so, more than would otherwise have been. The public fires must have cost the city about 200 chaldrons of coals a week, if they had continued, which was, indeed, a very great quantity; but as it was thought necessary, nothing was spared. However, as some of the physicians cried them down, they were not kept alight more than four or five days. The fires were ordered thus: one at the Custom House; one at Billingsgate; one at Queen-hithe, and one at the Three Cranes; one in Blackfriars, and one at the Gate of Bridewell; one at the corner of Leadenhall-street, and Grace Church; one at the North and one at the South Gate of the Royal Exchange; one at the Guildhall, and one at Blackwell Hall Gate; one at the Lord Mayor's door, in St. Helen's; one at the west entrance into St. Paul's, and one at the entrance into Bow Church. I do not remember whether there was any at the City Gates; but one at the Bridge foot there was, just by St. Magnus'. Church. I know some have quarrelled since, at the experiment, and said that—there died the more people because of those fires; but I am persuaded those that say so offer no evidence to prove it, neither can I believe it on any account whatever."

De Foe does not mention when these fires were lighted, or whether they were kept burning throughout the night. I should think it very probable they were not; for the principle upon which any benefit they afforded arose, was entirely misunderstood, as the following extract from the same author fully shews:—

"Some of the physicians insisted that these fires were not only no benefit, but injurious to the health of the people. This they made a great clamour about, and complained to the Lord Mayor. On the other hand, others of the same faculty, and eminent too, opposed them, and gave their reasons why the fires were and must be useful, to assuage the violence of the distemper. I cannot give a very full account of their arguments, on both sides; only this I remember, that they cavilled very much with one another: some were for fires, but that they must be made of wood, and not coal, and of particular sorts of wood too, such as fir, in particular, or cedar, because of the strong effluvia of turpentine; others were for coal, and not wood, because of the sulphur and bitumen; and others were for neither one or the other. Upon the whole the Lord Mayor ordered no more fires, and especially on this account, namely: that the plague was so fierce, that they saw, evidently, it defied all means, and rather seemed to increase than decrease upon any application to check and abate it."*

The great fire in London occurred almost at the period of the plague, the disease having subsided only a few months previous to that dreadful calamity; and it is worthy of remark that the city became perfectly free subsequent to it, and has remained uncontaminated by any fearful epidemic since, until the late appearance of cholera.

The accompanying observation I have taken from the report forwarded by the Belgium consul, at Smyrna, to his government, relative to the cholera, which raged there last summer:—"During the whole summer of 1831, the cholera ravaged the middle of Russia; in June and July it reached the mouth of the Danube; and in August, *after the famous fire at Pera, it disappeared from Constantinople;* and, keeping along the coast of the sea of Marmora, at length, in September, reached the Dardanelles and Enos."†

Among the numerous suggestions and recommendations put forth at the present moment, with reference to the prevention or cure of epidemic diseases, particularly that which has excited so much attention and alarm, I must notice the following, doubtless a powerful means of accomplishing the object I have proposed, viz.—"*to prevent the descent or precipitation of miasms, at night, in a noxious or virulent form, and to destroy the specific local atmosphere so liable to be formed over radiating surfaces, at that period:*"—"A soldier's prescription for the prevention of pestilence.—*The Scotsman* states, that a correspondent, who has had ample experience to ensure a thorough knowledge of the properties of gunpowder, suggests 'that great good might result to the inhabitants, as regards the warding off or staying the plague, with which Edinburgh is threatened, by a

* See De Foe's History of the Plague.

† See Medical Gazette for Feb. 18th.

liberal expenditure of that article. He proposes that from two to ten pounds of gunpowder should be packed in tin cases and exploded in the streets, and in the vicinity; and, also, that the artillery should be fired from the Castle, at Burnsfield-links, and at Leith fort. The agitation, and consequent rarification of the air, would purify the atmosphere considerably, while the smoke of the powder would also operate in the way of disinfection. Were this plan adopted, the gentleman would have no objection to superintend the street explosions, and take care that no damage ensued. Besides alluding to the effect of gunpowder at the battle near Warsaw, he remarks, that at Woolwich, when a garrison was first established there, the ranks were thinned by hundreds, through sickness, the ague, &c.; but ever since they began to exercise the great guns, and otherwise expend gunpowder, Woolwich has become as healthy a station for troops as any fortress in the kingdom.'"

This expedient, to be beneficial, must, I apprehend, be had recourse to during the night, and practised in, or as near as possible to, those situations where terrestrial radiation is proceeding with the greatest rapidity, so that *the diminished local temperature* may be somewhat raised, and the *specific local atmosphere* destroyed; then, I conceive, it might be found extremely advantageous.

With regard to contagion, so far as it has reference to the diseases of malaria, the question resolves itself into this; whether any emanation, secretion, or evacuation, from the bodies of the sick, can or does, at any period, co-operate with that peculiar condition of the atmosphere from which the disease, whether cholera or any other, primarily originates; and, of the affirmative of this, I should apprehend, from the numerous facts exhibited by our experience of typhus, yellow fever, cholera, and other epidemics, there can be little doubt.

Thus, then, the extrinsic sources of epidemical diseases come to be two-fold; the primary derived from malaria, the secondary and co-operating one, from the bodies of the sick.

But, I have before observed, that there must be some intrinsic foundation for the origin of disease, some peculiar and properly termed mysterious condition of the corporeal frame, without which, all extrinsic influences are harmless and without effect.

Upon these grounds we must consider that, in any situation affected with an epidemic, there must be many persons having *the intrinsic foundation*, and requiring only the operation of malaria, or the *primary extrinsic cause*, to establish disease; while, on the other hand, there no doubt must be many others with whom *the intrinsic foundation, and the primary extrinsic cause*, are so nicely balanced, that health is just preserved, and it is in these latter persons *the secondary or co-operating extrinsic cause* (viz. some emanation from a contact with the sick,) determines the occurrence of disease.

So, also, as regards many other places, the primary extrinsic source, (malaria) and the intrinsic foundation, (the predisposing corporeal condition of the inhabitants,) may be similarly balanced before the disease threatening them appears, requiring only the secondary co-operating source, (persons coming from infected places or contact with the sick,) to turn the scale against them; in these instances, the epidemic will be clearly traceable to contagion, *but only under the circumstances I have pointed out*, which enable us to understand how a person may originate an epidemic in one place, and not in another; and how the cholera may seem more contagious in some situations than others; facts which could not occur, if contagion were not a secondary and co-operating cause.

ARTICLE VI.

The History of some severe and fatal cases of Epidemic Disease, in a Letter to Dr. Hastings.

BY MR. K. WATSON, SURGEON, STOURPORT.

Stourport, March 1st, 1832.

My Dear Sir,

As the public mind is at present much interested in the progress of the prevailing epidemic, perhaps the following account of some cases of disease which have occurred in this neighbourhood, may be worth your attention. The cases in themselves would not be worth reporting, if it were not for the suspicion which at present attaches to any affection of the alimentary canal, peculiar either in its progress or termination. I have added a slight sketch of such localities as appear likely to have produced disease.

Believe me to be, my Dear Sir,

Very truly your's,

KENRICK WATSON.

Part of Stourport is built upon a sloping bank, in terraces; when the lower houses were erected, no provision was made for drainage from any which might subsequently be built above them, except under those in front, and these drains being very superficial, are often offensive. Many of the houses are likewise ill-ventilated, and surrounded by pig-sties.

Between the houses and the Severn is a meadow, into which the sewers of the town empty themselves; and whenever the river rises a few feet above its usual level, the meadow is flooded. Another row of houses in which disease has been prevalent, is situated below the level of the canal, which passes near, on one side, and on the other side, are two open ditches. Three deaths occurred in these cottages, within a very few days, from diarhœa, succeeded by hæmorhage from the bowels.

In general, the complaint has commenced in the night, with violent purging of a white fluid, like yeast; there has been but

little vomiting; no severe cramp, except in one case; great prostration of strength, and, when the case had been neglected for a few days, a sudden failure of the powers of life, delirium, stupor, insensibility, lividness of the face and extremities, followed, in a few hours, by death. Occasionally, the evacuations were of a very pale yellow; in one, they were first black and then green. In another severe case, there was a very peculiar clammy state of the skin. In three, hæmorhage took place from the bowels; and in one, the secretion of urine was nearly suppressed for several days. In a few cases it has been doubtful whether the disease was not typhus, the two complaints appearing to run into each other.

The first person who was taken ill, was a ragman and collector of bones and hareskins; he recovered. No other person in that house was affected, but the next-door neighbours, on each side, were subsequently attacked. In the next yard, with which, however, there was no direct communication, three persons were taken ill; two of them died about the seventh day of the disease. There does not appear to be any reason to believe that the complaint was communicated by infection. This disease has been very prevalent among the better classes of society, but, in these cases, errors in diet, or exposure to cold and damp, appear to have been the immediate cause. Several cases were attributed to eating pork; in one instance, to the imprudent use of saline purgative waters; and in another, to drinking freely of capilaire. All the cases that I have seen, that were properly attended to within twenty-four hours, have ultimately recovered, though several have continued in a precarious state for several days.

With regard to the treatment, in recent cases, small doses of calomel and opium, with chalk mixture and ammonia, at the same time carefully supporting the strength, by mild diet and a moderate allowance of brandy, have succeeded in quickly curing a great majority of cases. In the severe or neglected cases, the treatment has been varied, so as to meet the particular state of the different patients. In addition to the above, opiate injections, leeches, blisters, turpentine, quinine and calombo, have been employed, as different symptoms have arisen. I have, however, to regret that, in those cases which have been neglected for a few days, but little permanent advantage was derived from any treatment. The following cases will give a general view of the progress of the disease in those individuals in whom the brain became affected, and which were fatal in consequence.

Nov. 19, 1831.—A. B. æt. 21. Her constitution is very delicate; liable to affections of the chest, and to enlargements of the joints of the fingers, occasioned by effusion into their capsular ligaments. For some weeks past she has been residing upon the sea coast, by which she has been much benefitted. Ten days since she was recommended to try the effects of some saline waters in the neighbourhood, she took them twice, and they purged her most violently. On the 17th she arrived at her

own house in a very debilitated state, the purging had continued the whole of the time since she drank the waters; she was so very much exhausted, that I considered her in immediate danger. She was directed to take chalk mixture with opium; and turpentine with ammonia to be applied externally to the abdomen.

21st.—Diarrhœa has abated very much; the catamenia have appeared; was seized this morning with violent cramps of the abdominal muscles. To have an anodyne injection; fomentations, and ammonia, with Battley's sedative in camphor mixture, every three hours.

7, p. m.—Cramp removed; bowels have not acted since yesterday; to have an injection of warm water at bed time.

22nd.—Has slept well, but become delirious this morning; the swellings of the finger joints have disappeared; bowels were not moved by the warm water; small, quick, and hard pulse; face flushed; evident marks of inflammation of the contents of the cranium. Purgative, injection, leeches to the temples, effervescing draughts, cold to the scalp, and sinapisms to the extremities.

3, p. m.—Two leeches only have bled much; pulse much sunk, very quick and feeble; blister to the head; ammonia every hour.

24th.—Stupor; hands and face livid; sinking.

3, p. m.—Died at noon.

Jan. 17, 1832.—Munn, æt. under 30. Has been unwell nine days; has had diarrhœa, certainly, for a week; took no medicine (except some copaiba, which he appears to have been taking for some other complaint,) before the 15th; since then he has been taking chalk mixture with opium; he is now insensible; pulse about 120, soft and feeble, purging still continues; he swallows what is poured into his throat. Scalp to be scarified and then blistered; ammonia every hour; calomel, opium and brandy; sinapisms to the feet.

18tn.—Sinking fast; still swallows what is poured into his throat.

19th.—Died in the night.

Jan. 18, 1832.—Pattrick, æt. 15. Has been suffering from diarrhœa since the 25th. In the first instance she took some tincture of rhubarb, and since then, some chalk mixture with opium. Her mother states that her evacuations were first black, and then green. She has had a blister to the back of the neck. She is now delirious. There appears to be some tenderness in the hepatic region. A blister was directed to be applied to the tender part, and Dover's powder, mercurial pill, chalk mixture, and ammonia, to be taken every three hours.

18th.—Stupor and insensibility; hands and face livid.

19th.—Died last night.

ARTICLE VII.

Report of the Worcester Dispensary, for the year 1831.

BY ROBERT I. N. STREETEN, M. D., WORCESTER.

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Canal.	Severn.	City.	Suburbs.	County.	Total.
Abscess,	4	2	0	1	3	0	3	1	0	7
Amaurosis,			1		1					1
Amenorrhœa,	2				2					2
Anasarca,	1		1	2			3	1		4
Aneurism of Aorta,	1				1					1
Apoplexy,		1				1				1
Ascites,	2		1		2		1			3
Asthma,				1	1					1
Bronchitis,	43	16	4	14	21	3	35	12	1	77
Bronchocele,		1	3		1			2	1	4
Cachexia,	3		1		1		2	1		4
Carditis,	6	2	2	1	4	1	3	2	1	11
Catarrh,	3	1		3	3		4			7
Catarrh (epidemic)			8		1	1	1	4	1	8
Cephalalgia,	6	4	1	1	4	2	4	1	1	12
Chlorosis,	2				1				1	2
Cholera,	1	1	7		5		2	2		9
Chorea,		1					1			1
Colic,	2						1		1	2
Constipation,	5			1			5	1		6
Contusion, &c.	3	2		2	1	1	2	3		7
Cynanche Tonsillaris		2	1		1		1	1		3
Cystitis,	1				1					1
Delirium Tremens,	1							1		1
Diarrhœa,	4	4	3	4	3	2	6	3	1	15
Diseased Knee,	1	2					2	1		3
Diseased Uterus,			1			1				1
Dysentery,	3						3			3
Dysmenorrhœa,		2					2			2
Dyspepsia,	37	21	11	12	27	3	35	10	6	81
Dyspnœa,	1			1	1		1			2
Dysuria,	1						1			1
Enteritis,	3		2				3	2		5
Epilepsy,	3				2		1			3
Eruption,				1					1	1
Erysipelas,	1	1			2					2
Erythema,	3				1	1		1		3
Erythema nodosum,			2		2					2
Fever,	19	11	18	23	17	22	19	11	2	71
Fever, (remittent)	1		1		2					2
Furunculus,		1						1		1
Gastritis,		1	2	1		1	1	2		4
Gonorrhœa,	2		1		2		1			3
Hæmatemesis,		1					1			1
Hæmoptysis,	2	1	1		2		2			4
Hæmorrhagia Uterina,	1						1			1
Hæmorrhois,				1			1			1
Hemicrania,		2					2			2
Hepatitis,	9	4	1	3	6		6	2	3	17
Hernia,	3	3			3		2	1		6
Hernia Humoralis,				1				1		1
Herpes,	1	1			1			1		2
Hydrocephalus,		1			1					1

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Canal.	Severn.	City.	Suburbs.	County.	Total.
Hydrops Ovarii,	1							1		1
Hysteria,	3		1	1		2	1	1	1	5
Icterus,	2			2	1		3			4
Inflamed Arm,				1			1			1
Inflamed Leg,	1	1	3	2	2	1	3	1		7
Inflamed Nose,		1					1			1
Inflamed Vagina,	1							1		1
Ischuria,	1	2			1	1		1		3
Laryngitis,	1	1			1			1		2
Lepra,	1	1		1		1		1	1	3
Leucorrhœa,	2	2			1		3			4
Lumbago,				2	1		1			2
Marasmus,		1					1			1
Melancholia,			1				1			1
Meningitis,	1	3		1	1		3	1		5
Menorrhagia,	4		1		5					5
Mesenteric disease,	1				1					1
Nephralgia,	1	1			2					2
Neuralgia,	1			1	1			1		2
Obstipatio,	1			1	1		1			2
Œdema pedum,		1						1		1
Ophthalmia,	9	2		4	4	3	4	2	2	15
Paralysis,	3	2	1	1	1	1	3	1	1	7
Peritonitis,	1		1	1		1	2			3
Pertussis,		1		1			1	1		2
Phlegmasia dolens,	1		1		1		1			2
Phthisis,	25	19	9	4	13	7	17	18	2	57
Pleuritis,	5	6	2	5	5		8	4	1	18
Pleurodynia,	1					1				1
Pneumonia,	3		3	1	1	2		4		7
Prolapsus Ani,	1						1			1
Psoriasis,		1						1		1
Purpura,		1					1			1
Rheumatism,	12	3	1	2	4	3	8	2	1	18
Rubeola,	7	1			5	1	1	1		8
Scarlatina,		1	1	2	2		1	1		4
Scrofula,				1					1	1
Spasms,	1						1			1
Spinal Irritation,		3			1		1	1		3
Syphilis,				3		2			1	3
Tinea Capitis,	1	1	1		1	1		1		3
Tumour,			1			1				1
Ulceration of Fauces,	2			1			3			3
Ulceration of Leg,	4	4	1		3	2	3	1		9
Ulceration of Mouth,	2	3			1	2	1		1	5
Variola,		1					1			1
Vermes,				1		1				1
Vomica,			1			1				1
Vomitus,		1			1					1
Unknown,	6	6	5	1	4	1	8	4	1	18
Total,	287	159	107	113	191	79	243	120	33	666

Deaths 44 ; fifteen from phthisis, seven from bronchitis, five from fever, two from diarrhœa, two from meningitis, and one each of the following diseases—abscess, catarrh, erysipelas, gastritis, hydrocephalus, ischuria, obstipatio, paralysis, pleuritis, pneumonia, rheumatism, rubeola, and ulceration of the mouth.

Re-admissions from last year, 28, one of which, a case of phthisis, terminated fatally.

The subjoined remarks upon some of the cases which have been admitted at this Institution, chiefly relate to those which fell more immediately under my own observation.

Anasarca.—One of the cases of this disease occurred in a young girl, 9 years of age, and was of the most severe description. The whole body was greatly swollen; the face puffy; the extremities, and especially the legs and thighs, enormously distended; the respiration much impeded; the urine very scanty, and the bowels confined. There was violent palpitation of the heart, and the bellows sound was heard most distinctly, upon examination with the stethoscope. She had been labouring under anasarca for twelve months, and under palpitation of the heart, with occasional dyspnœa, for a much longer period. She was admitted a patient at the dispensary, the 2d of July, and was ordered, a quarter of a grain of calomel, a third of a grain of digitalis, and a grain of squill, three times a day; and ten grains of jalap, with a scruple of super-tartrate of potash, every morning. Under the use of these remedies the swellings rapidly subsided, and she was discharged, on the 30th, entirely free from dropsical symptoms, and with the palpitation of the heart considerably abated.

Ascites.—There were three cases of dropsical effusion into the abdominal cavity; two of these were treated chiefly with diuretics; the other, which was under my care, was obviously the result of chronic inflammation of the peritonæum. The patient, a gloveress, aged 36, was admitted Jan. 26th; she complained of pain, and tenderness on pressure, over the lower part of the abdomen on the left side. There was considerable swelling, and very evident fluctuation; the urine scanty; the bowels confined; the general health much deranged. She was ordered eight leeches to the pained part, and five grains of blue pill, every night; and a solution of Epsom salts, with sweet spirits of nitre, in cinnamon water, three times a day. Relief was experienced from these measures; and the mouth becoming tender, the pill was stopped on the 4th of Feb. On the 8th, she was much worse; the pain had returned with increased severity, and the pulse had become sharp. Ten ounces of blood were drawn from the arm; eight leeches subsequently applied to the bowels; and two drachms of super-tart. of potash ordered to be taken every morning, with half a drachm of the sp. æth. nit. three times a-day.—On the 10th, there being still much tenderness of the abdomen, twelve leeches were applied, and half an ounce of Epsom salts, ordered to be taken. The pain was greatly alleviated by these remedies; the urine became more copious, and the swelling of the bowels subsided. She was discharged, cured, on the 7th March.

Bronchitis.—The number of cases of inflammation of the mucous membrane of the lungs, was seventy-seven in all; of these, forty-three occurred in the first quarter; sixteen in the second; four in the third; and fourteen in the last. Thirty-

five, or more than the half, were in the confined and close parts of the town included in the city district. The number of males affected was thirty; of females, forty-seven:—of adults, seventy-two—sixty-one of whom were upwards of 40 years of age; of children, under 14, five. The occupations of twenty-nine were entirely sedentary; thirteen were much exposed to the vicissitudes of the weather; seven to damp within doors; six were engaged in trades requiring much manual labour, but otherwise not exposed to the causes of disease; five were employed in the grounding of leather, and other occupations producing a good deal of dust; and four were exposed to sudden and great changes of temperature. The remaining thirteen were either engaged in domestic avocations, or had no particular employment. The following table exhibits the proportional prevalence of these affections in the several districts, and during the several seasons of the year.

		QUARTERS.				DISTRICTS.				
	Total.	1*st.*	2*nd.*	3*rd.*	4*th.*	*Can.*	*Sev.*	*Cy.*	*Sub.*	*Co.*
Cases of Bronchitis,	77	43	16	4	14	21	8	35	12	1
Total Cases, ...	666	287	159	107	113	191	79	243	120	33
Proportions, 1 in	8.67	6.68	9.94	26.75	8.07	9.09	9.87	6.94	10.00	33.00

Deaths, 7.—1 in 11.

The characters of the disease were materially influenced by the age, constitution, habit of life, &c. of those attacked. Of the five cases occurring among children, four were immediately consequent upon measles, and one of them, in a girl eleven years of age, who had previously had hooping cough as well as measles, terminated fatally. Very few of those which occurred among adults, were of an actively inflammatory character, and, at the same time, uncombined with other disease, though several required a moderate bleeding from the arm, with the subsequent application of leeches and blisters. Of the combinations with other diseases, a frequent form was a complication with chronic hepatitis or dyspepsia; in some of the cases, certainly induced by the abuse of fermented liquors. Several cases also occurred in combination with enlarged heart, as pointed out by Dr. Hastings in a former part of this Journal. The most severe, as well as the most intractable of all the varieties of the disease, was what appears to be a further link in the chain of morbid action, the complication with anasarca or other forms of dropsical effusion. In the more chronic cases of this description, the disease was commonly found to admit of considerable relief, though, of course, from the organic changes which had taken place in the central organ of the circulation, a perfect cure could in no case be obtained; but in those persons whose constitution was much debilitated, and the effusion consequently more rapid, it was often found impossible to arrest the progress of the disease, and accordingly, three fatal cases occurred, among the individuals affected with this form. One case only fell under my notice where the disease assumed the characters of pulmonary consumption.

Bronchocele.—One of these cases resisted the iodine, no progress being made under the use of this remedy. The swollen gland was afterwards diminished, by the application of leeches and blisters, and the exhibition of an alterative dose of Plummer's pill, but not entirely removed.

Carditis.—Under this term are included chronic affections of the heart of various descriptions, namely;—1. A slight case of increased impulse of the heart, occurring in a man aged 49, a grounder of leather. 2. Palpitation, and irregular action of the heart, the result of chronic inflammation of the pericardium, in a female aged 35, a gloveress, who had been previously affected with rheumatism. 3. Hypertrophy of the left ventricle, with valvular disease, accompanied with puffy swelling of the face, considerable anasarcous swellings, and chronic disease of the liver, in a grounder of leather, aged 40. He had experienced an attack of acute rheumatism ten or eleven years previously, and had never been free from palpitation of the heart since. The dropsical effusion was removed, in this case, by elaterium, after a variety of remedies, including squill, digitalis, colchicum, and various other diuretics, had failed. The mouth was also slightly affected by blue pill, in combination with squill and super tart. of potash, in the first instance. 4. Increased impulse of the heart from hypertrophy of the left ventricle, with dyspeptic symptoms, much relieved under the use of tinct. digitalis in inf. of calumba, in an agricultural labourer, aged 23. 5. A case, entered in the Journals hypertrophy of the heart, in a female, 24 years of age. 6. Palpitation, with some dyspeptic symptoms, in a man, aged 58. 7. Enlarged heart, with dropsical swellings, in a female, aged 23, who had previously had several attacks of inflammation of the pericardium. 8. Palpitation of the heart, with dyspnœa, in a female, aged 40, subject to inflammatory attacks of the peritoneum. 9, 10, and 11. Cases of chronic pericarditis.

Catarrh (epidemic).—Epidemic catarrh, or, as it is more commonly termed, influenza, was remarkably prevalent in this city and its vicinity during the months of July and August. The cases were frequently mild, and of short duration; and, from the symptoms being, in such instances, simply those of a common cold, assistance was not applied for. This will account for the numbers admitted at the dispensary amounting to no more than eight. The first was admitted on the 5th July; the last on the 13th Sept. at which time the epidemic had nearly exhausted itself. In the five cases which fell under my care at this institution, as well as in several others occurring in private practice, the symptoms were, for a time, exceedingly severe. Great oppression at the pit of the stomach, with pain, on pressure; sense of weight across the forehead, and constriction under the sternum, with soreness, on attempting a full inspiration; watery discharge from the eyes and nostrils; severe rending cough, with expectoration of thin mucus, marked the first stage of the disease. These symptoms were preceded by chilliness or shiver-

ing, and accompanied with considerable heat of skin; quick, full, though rather feeble pulse; and white furred tongue. In some few instances the pulse was somewhat hard, and such cases required the use of leeches, or even of the lancet, but the general type of the disease was certainly low, and in most instances depletion was not borne well. A remarkable feature of the greater number of the cases was that, though, perhaps, in the course of two days, most of the symptoms had subsided, leaving nothing but a cough, with free expectoration, a most overpowering debility remained, the patient being unable to sit up for some days, from mere weakness alone. It did not appear to be confined to any class of people in particular, but it was certainly more prevalent in open situations, as in the country and suburbs, than within the limits of the town itself; and it seemed likewise to attack those engaged in avocations which led them to be much in the open air, more frequently than those whose occupations confined them chiefly to the house. The treatment chiefly adopted at the dispensary, was the exhibition of antimonial and saline diaphoretics, with the subsequent addition of squills, the bowels being kept open by castor oil, or other mild laxatives.

Cephalalgia.—It is, perhaps, worthy of notice, as pointing out the injurious effects of close confinement, combined with sedentary occupations, that out of the twelve cases of this disease, ten occurred in the persons of gloveresses, and the remaining two were also in females confined to a similar sedentary employment: nearly all of them were connected with a disordered state of the digestion.

Cholera.—These cases were the common bilious cholera of this country, but some of them extremely severe and obstinate, with a great tendency to relapse. Sarah T. a gloveress, aged 50, residing on the bank of the canal, was attacked with vomiting and purging, on the 19th Jan. She was admitted at the dispensary on the 21st. There was extreme prostration of strength; quick, small, feeble pulse, and great tenderness over the whole of the abdomen; the tongue was brown and dry, and the vomiting and purging continued. She was ordered ten drops of laudanum, with fifteen of aromatic spirits of ammonia, in camphor mixture, every three hours; and fomentations of heated bran were kept constantly applied to the abdomen. The vomiting and purging were checked by these measures, and the pulse improving, a grain of solid opium was ordered every six hours, with occasional doses of chalk mixture, instead of the draught. She became slowly convalescent, but had three or four relapses from slight irregularities in diet. S. H. aged 18, a boatman, residing on the canal banks, was attacked with vomiting and purging on the 22d June, and admitted a patient at the dispensary the following day. There were griping pains of the bowels, attended with pain on pressure, with firm quick pulse, considerable heat of skin, and furred tongue. This case was treated by the application of leeches to the bowels, and small doses of

calomel and opium. Subsequently low fever came on, attended with twitching pains about the umbilicus, and a confined state of the bowels. Leeches were again applied, the calomel and opium continued, and he took, occasionally, some castor oil. There was also the same tendency to relapse in this case, as in the former, from trifling inattention to the prescribed rules. E. H. a laundress, 50 years of age, residing in a low situation not far from the canal, and subject to attacks of bowel complaint, was attacked with vomiting and purging. She took calomel and opium, and, subsequently, pills of ipecacuanha and chalk. When the nausea and vomiting had subsided, she recovered rapidly. The only other case worthy of notice, was a very severe one, occurring in a confined part of the town, where the drains are in a notoriously bad state. The patient was a young woman, 19 years of age. She complained of no pain, but only of sense of sinking at the pit of the stomach, with vomiting. She had a good deal of fever, and some purging, attended with considerable debility. The remedies employed seemed to exert but little permanent effect, though affording relief for a time; but there is reason to believe that they were not very attentively administered. She had, afterwards, cough, with muco-purulent expectoration and dyspnœa, which I have since understood terminated in pulmonary consumption.

Chorea.—This case, occurring in a boy aged 16, was treated by the carbonate of iron, commencing with two drachms three times daily, the quantity being subsequently increased to three drachms, and half an ounce for a dose. The spine was also rubbed with a stimulating liniment, and fifteen grains of aloetic pill were taken every morning. He was discharged, cured, in about six weeks.

Delirium Tremens.—W. G. aged 31, a brewer, of intemperate habits, was admitted at the dispensary Jan. 28, 1831, affected with symptoms of common continued fever, attended with a good deal of head-ache. A cathartic powder was given, and some saline medicine every six hours. He had a good deal of violent delirium on the 29th, and was bled freely on the following morning. On the 31st, having passed another disturbed night, he was found to be slightly incoherent, the whole body being in a state of constant tremor; there was head-ache; the expression of countenance was suspicious, and he thought that rats and other small animals were running about his bed, and, occasionally, he appeared much terrified; the pulse was quick and soft; the skin bedewed with perspiration. He was reported to have had no sleep since the 27th. Twenty drops of laudanum were ordered in a saline draught every three hours. On the following morning, Feb. 1st, he was found to have had another bad night, and the dose of tr. opii was increased to thirty drops every three hours. About four o'clock, on the morning of the 2nd, he fell asleep, and slept for six hours; he was collected when he awoke, took some tea, and again went off to sleep. From this time he

went on uniformly well; there was no return of the delirium or tremor; the bowels, which had become costive, were opened by some castor oil, but he required, for some time, the use of anodynes, to procure him sleep at night, on which account he was not discharged from the dispensary till the 28th Feb. at which time he was perfectly well.

Diarrhœa.—The two fatal cases, entered under this head, occurred in children—the one twelve, and the other thirteen months old. They were both, it appears, in a hopeless state when admitted, having been ill some weeks. The former died on the second, the latter on the third day, but under what circumstances I am unable to say, as they did not come under my care. In addition to these fifteen cases of simple diarrhœa, instances of relaxed bowels, accompanying other diseases, were of frequent occurrence, especially in the autumnal months.

Dyspepsia.—The subjoined table shews the relative prevalence of this disease, in the several districts, and at various seasons of the year.

		QUARTERS.				DISTRICTS.			
	Total.	*1st.*	*2nd.*	*3rd.*	*4th.*	*Can.*	*Sev.*	*Cy.*	*Sub.*	*Co.*
Cases of Dyspepsia, 81	37	21	11	12	27	3	35	10	6	
Total Cases.....666	289	159	107	113	191	79	243	120	33	
Proportions, 1 in 8.22	7.76	7.57	9.73	9.42	7.07	26.33	6.94	12.00	5.56	

The number of males affected with stomach complaints was eight; of whom four were engaged in sedentary employment. The number of females was seventy-three; of these, thirty-six were gloveresses, fifteen closely confined to the house, and employed in various kinds of needlework; of the remaining twenty-two also, several were necessarily much confined, and their employments more or less sedentary. With respect to the general character of these affections, little need be said: more or less pain at the pit of the stomach, extending to the left side, with impaired appetite, head-ache, flatulence, and a disordered state of the bowels, were the usual symptoms. In addition to these, however, several of the cases were attended with palpitation of the heart: in such instances, after the removal of pain by the application of a few leeches, or a blister to the region of the stomach, a few drops of the tr. of digitalis, in some bitter infusion, has been found of great service.

Enteritis.—M. A. a chairwoman, 34 years of age, had severe pain of abdomen, especially in the left iliac region, with extreme tenderness on pressure; bowels confined; pulse quick, weak; expression of countenance anxious. She was bled till faintness was induced, and twelve leeches immediately applied to the abdomen where it was most painful. She afterwards took some calomel, with extract of henbane, followed by castor oil; and recovered rapidly. This case is noticed on account of a practice which I have often found beneficial, not only in this disease, but also in inflammatory affections of other organs: the immediate following up of a general bleeding, (regulated according to the

effect produced,) by the local application of leeches, by which, at the same time that the impulse of blood upon the inflamed part is lessened, the gorged vessels are themselves unloaded. I feel assured that, by the adoption of this method, much time is saved in the treatment, and much strength to the patient; and there is less risk of a degeneration into chronic disease, or of any organic changes taking place. In local inflammations the first effects of a sufficient general bleeding are—the lessening of the impulse upon the affected organ, and consequent removal of pain, the patient expressing more or less immediate relief; but the small vessels are still gorged with blood, and are rarely able to empty themselves of their contents, before, the circulating system having rallied from the immediate effects produced upon it by the abstraction of a part of its contents, a renewal of the impulse upon the inflamed part takes place, and a return of the local symptoms necessarily ensues; another bleeding is, of course, required; the patient is weakened; the tone of the parts is impaired, and the convalescence necessarily protracted; and, in some instances, a chronic inflammatory action is set up, organic disease being, not unfrequently, the ultimate result.

Erysipelas.—The fatal case occurred in a female, 25 years of age. The eruption coming on shortly after delivery, inflammation of the membranes of the brain supervened, and, notwithstanding repeated bleeding, both general and local, with nauseating doses of the tart. of antimony, the application of cold to the head, purgatives, &c. proved fatal.

Erythema nodosum.—The two cases of this disease occurred in the same locality, and were admitted at the dispensary the same day. They were attended with precisely similar symptoms. In both instances there were several slight elevations on the extremities, especially on the legs, with redness, most intense in the centre, and gradually fading into the colour of the surrounding healthy skin. These parts were very tender when touched, and felt hard; the hardness gradually diminishing with the swelling and redness. There was considerable fever, heat of skin, quick firm pulse, and white tongue. No local application was made use of, but blood was drawn from the arm, and purgatives were given; under which treatment the swellings soon subsided. Another case subsequently presented itself in the same neighbourhood, but was not brought to the dispensary.

Fever.—The following table exhibits the relative prevalence at the different seasons of the year, and in the several districts:

		QUARTERS.				DISTRICTS.				
	Total.	*1st.*	*2nd.*	*3rd.*	*4th.*	*Can.*	*Sev.*	*Cy.*	*Sub.*	*Co.*
Cases of Fever,.....	71	19	11	18	23	17	22	19	11	2
Total Cases, ...	666	287	159	107	113	191	79	243	120	33
Proportions,	1 in 9.38	14,05	14.45	5.95	4.91	11.12	3.59	12.79	10.91	16.50

Deaths, 5.—1 in 14 1-5th.

Of these cases, fifteen were attended with symptoms of local affection in the brain; sixteen with disease of the chest. In

nineteen there was more or less excitement of some of the viscera of the abdomen; and in the remaining twenty-one there does not appear to have been any very decided local affection. It is a striking circumstance connected with the influence of epidemic constitutions, that, of the sixteen cases in which the pulmonary organs were affected, ten, or nearly two-thirds, occurred during the prevalence of the catarrhal epidemic in this city; and of eleven cases in which there was urgent diarrhœa, eight have arisen since the appearance of cholera in the country. This tendency to purging, with occasional vomiting, and even cramps, has been observed in almost all diseases, attended with a low febrile action, since the middle of October. One of these cases was attended with copious hæmorrhage from the bowels, but the patient ultimately recovered.

Hepatitis.—Of seventeen cases of this affection, thirteen occurred in females, ten of whom were closely confined to the glove sewing, and two others engaged in equally sedentary employments. One of the men, also, was a shoe-maker: the remaining four were chiefly employed in more active occupations.

Laryngitis.—The two cases of this disease had both been of long standing. One of them occurred in a young woman of delicate constitution. There was much pricking pain in the larynx, with troublesome cough, hoarseness, and muco-purulent expectoration; she was greatly emaciated, and very weak. Light nourishing diet was ordered, and a grain of the sulphate of zinc, with half a grain of opium, and three grains of extract of hemlock, three times a day. Under this treatment she gradually gained some strength; leeches, about four at a time, were then frequently applied to the throat, and friction, with a stimulating liniment, night and morning. A blister was also applied to the nape of the neck. The symptoms gradually yielded to these measures. She lost the pricking sensation in the throat; the expectoration moderated; she regained her voice, and ultimately recovered her health. The other case was in a woman, aged 62. The symptoms in her were more active, but there was much less debility and wasting. Leeches were frequently applied, and she took antimonials, and, subsequently, the sulphate of quinine, with considerable relief; but a degree of chronic action still remained when she was discharged from the dispensary.

Obstipatio.—The fatal case occurred in an old man, 76 years of age, broken down and worn out by the infirmities natural to his time of life. The obstruction appeared to arise more from want of contractile power in the coats of the large intestines, than from any actual impediment to the passage of the fœces. The colon was greatly distended, and could be readily traced through the abdominal parietes. The croton oil, aided by turpentine clysters, brought away a large quantity of the collection which had accumulated in the intestines, but the powers of his constitution were gone, and it was found impracticable to rally

them again. He sunk, gradually, into a state of torpor, and died seven days after his admission. The evacuations had not been loose, but consisted chiefly of the hardened fœcal matter broken down in the enemata administered.

Ophthalmia.—In four of these cases there was ulceration of the cornea; two were cases of ophthalmia tarsi; and one scrophulous ophthalmia with abscess of the cornea.

Paralysis.—Under this head are included—1. Hemiplegia, occurring in a woman, aged 60. 2. A case of Hemiplegia, in a young woman, aged 31. 3. Paraplegia, in a gloveress, 49 years of age, of seven or eight months standing, accompanied by tenderness, on pressure, over the inferior dorsal and lumbar vertebræ. This case was much benefitted by the frequent application of leeches to the pained part, with a stimulating liniment to the spine, and the internal use of the sulph. of zinc. 4. Paralysis, in a female, aged 36, residing on the banks of the Severn. 5. Paralysis, of between five and six years duration, of the nerves of sensation of both lower extremities, attended with head-ache. The subject of this case, a female, age 43, was relieved, the numbness of the limbs in some degree abating, by blistering between the shoulders, leeching the head, and the internal exhibition of the sulphate of zinc. She was, however, too irregular in her attendance to allow the remedies employed their proper effect. 6. A case entered in the journals simply paralysis, occuring in a female, 44 years of age, which appears to have proved fatal in three days. 7. Another case entered paralysis, in a man, aged 30.

Pertussis.—Hooping cough was exceedingly prevalent during the autumn and winter months of this year; but cases of this disease, unless very severe, are seldom presented at the dispensary, being mostly treated by the parents with domestic remedies.

Phlegmasia dolens.—There were two cases of this severely painful affection. One of them occurred in a female, aged 46, shortly after her confinement. The left leg was the affected one, and was very considerably swollen, with severe pain, and extreme tenderness in the groin of the same side. Leeches were applied, more than once, to the groin, and the leg was well fomented with the decoction of poppies, with great relief. She took also some saline diaphoretic medicines, and was convalescent in little more than a fortnight. The other case was remarkable, as arising in an unmarried female who had not been pregnant, and apparently taking its origin from suppression of the catamenia, brought on in consequence of getting the feet wet. The symptoms differed in no respect from the usual character of the disease. The right leg was the one affected: it was pale, swollen, tense, and excessively painful. There was, also, tenderness in the groin of the affected limb, with a good deal of fever. Leeches were applied to the groin, and, the bowels being confined, a powder of calomel and jalap, followed by a saline purgative mixture, was prescribed. The mixture was subsequently con-

tinued, with some sweet spirits of nitre, three times a day, and in about a fortnight she had little to complain of but weakness.

Phthisis.—The number of cases of tubercular consumption was fifty-seven, of which fifteen terminated fatally. Some of these were almost in a dying state when admitted, and the greater part of them in the last stage. Many of the cases admitted of very considerable relief: ten were discharged almost entirely free from complaint, and in two, the symptoms were altogether removed. The greater number occurred amongst females, the proportions being forty-two women and fifteen men, or nearly three of the former to one of the latter. Twenty-nine, or nearly three-fourths, of the females were gloveresses; two were engaged in a similar close occupation; five exposed to wet; the remaining six chiefly engaged in domestic occupations. The employments of the men were either such as confined them to the house, and obliged them to work in a constrained stooping position, or such as required considerable exertion, connected with exposure, while heated, to atmospheric changes. The following table exhibits the relative prevalence of the disease, under the circumstances of season and locality:

		QUARTERS.				DISTRICTS.				
	Total.	*1st.*	*2nd.*	*3rd.*	*4th.*	*Can.*	*Sev.*	*Cy.*	*Sub.*	*Co.*
Cases of Phthisis, ...	57	25	19	9	4	13	7	17	18	2
Total Cases,.....	666	287	159	107	113	191	79	243	120	33
Proportions, 1 in	11.68	11.48	8.37	11.89	28.25	14.69	10.28	14.29	6.66	16.5

Deaths, 15.—1 in 3 4-5ths.

Pleuritis.—There were five males and thirteen females affected with inflammation of the serous membrane of the lungs. Eleven of these were engaged in sedentary occupations; the remaining seven in employments which exposed them to the action of cold and damp. The fatal case occurred in a female, seven months pregnant, subsequent to measles.

Rheumatism.—The case of rheumatism, which terminated fatally, was one in which the patient had been copiously bled, previous to her admission at the dispensary. She was suffering extremely from pain in the joints; and there was a good deal of palpitation of the heart, with stitching pains through the left side of the chest, sense of straitness across the strernum, and great anxiety. She was freely leeched and blistered; the mouth was made sore with calomel combined with opium, and she took colchicum with saline cathartics, and, subsequently, digitalis; but though at times relieved by these remedies, repeated exacerbations of the symptoms of inflamed pericardium took place, and she sunk in about three weeks from the date of her admission.

Rubeola.—In the fatal case of measles, the child was dying, from effusion into the air tubes, the result of bronchial inflammation, when admitted. The disease was exceedingly prevalent in the spring of the year, and many of the cases very severe.

Ulceration of the mouth.—There were several cases presented themselves to notice in the months of March and April, in which

spreading, though somewhat superficial, ulceration of the internal parts of the mouth took place. The mucous membrane, lining the cheeks and covering the maxillary bones, was extensively eroded. Five of these cases were received as patients, but several others were, about the same period, brought for advice. In one of the five, it appears, there was also gangrene, and the child died. It appeared chiefly to affect children, and was attended with some degree of fever; though I saw one case in which it affected an adult, the mother of one of the children admitted, and, in her, was attended with severe head-ache, and much constitutional disturbance. The treatment pursued was, to give, in the first instance, a few grains of the hydrarg. c. creta, and, subsequently, small doses of nitrate of potash, under which the ulceration rapidly healed. The fatal case I did not see.

Variola.—It should be observed that, although only one case of small pox occurs on the journals of the institution, it forms no criterion as to the prevalence of the disease, since the poor are very much in the habit of treating these cases themselves, without having recourse to medical assistance. The same is the case with others of the exanthemata, as measles and scarlet fever; and also with hooping cough. Accordingly, though only a small number of cases of these affections are recorded in this report, yet they have been extremely prevalent, and a considerable mortality has resulted amongst the children of the poor in consequence. Measles, as it has been already observed, were prevalent during the opening months. Scarlet fever made its appearance about the month of June, the time when the influenza was epidemic, and has continued to prevail since that time up to the present (April, 1832), several fatal cases having lately occurred. Cases of measles also occurred towards the close of the year, and hooping-cough has been extensively prevalent through the town and surrounding country, since the autumnal season. Small-pox has also been fatally prevalent, amongst those unprotected by vaccination, or by having previously gone through the disease, from about the same period.

ARTICLE VIII.

Coventry Benevolent Dispensary.

Although the Dispensary has been in operation little more than eight months, the following is an outline of the increase of free members, avoiding fractions:—

The first admission on the 18th July, 1831, was ...	50
The number in August, amounted to	150
——— in September, ...	390
——— in October, ...	830
——— in November, ...	1150
——— in December, ...	1270
——— in January, 1832, ...	1510
——— in February,.....	1930
——— in March,.....	2280

The regular and steady addition to the number of members, as shewn in the above list, is peculiarly gratifying, and proves that the Institution has risen wholly by its own merits.

The Medical Report is as follows:—

Patients admitted from the commencement of the Institution, July 18, 1831, to March 25, 1832—1505.

Cured,	1189
Relieved,	101
Dead,	19
Under treatment,	186
Midwifery cases,	10
	1505

In the above list are included several surgical operations, one of which is a successful amputation of the leg. There have been also twenty-nine children vaccinated, and the committee wish it to be generally known, that gratuitous vaccination is afforded to all persons, whether members of the Institution or not.

THE FREE MEMBERS' FUND.

Dr. paid	£.	*s.*	*d.*
To Stott and Wyley, for Medicine,	22	19	3
To Reynolds,	20	11	6
To Williams,	10	7	6
	53	18	3
Deduct the present Stock of Medicine, valued and charged to the next Year's Account,	8	8	0
Cost of Medicine this year,	45	10	3
Paid to the Surgeons,	80	17	8
	126	7	11
Cr.			
Receipts from Free Members, from August 1, 1831, to March 25, 1832,	126	7	11

The general description of persons admitted as Free Members, may be comprised under three classes: first, and by far the most numerous class, those who have been without any medical aid whatever; the lamentable consequences of which have, in many cases, been painfully evident to the surgeons of this establishment. Secondly, those who have usually sought gratuitous advice from the physicians and surgeons, and have procured their medicines from druggists. Thirdly, those whose situations in life rendered the payment for regular medical advice very precarious. From the weekly contributions of such classes in society, the institution has been enabled to pay the surgeons for an attendance of six months, (omitting the time preceding October as a mere commencement of the establishment,) for an average of somewhat less than 1600 members, £80. 17s. 8d. or at the rate of 2s. for each member per annum. The committee therefore calculate that the future yearly appropriations to these gentlemen will be, for 2000 members, £200; or, for 2500 members, £250, exactly according with the original estimate, and exceeding the

amount usually paid by clubs, which may be considered as institutions nearly similar. The committee are desirous of further explaining what they consider a most important feature in this establishment, and which renders it peculiarly deserving of the assistance and patronage of every thinking member of society. A Dispensary, formed upon the principles of the Coventry Benevolent Dispensary, places efficient medical aid, in a manner pleasant to their feelings, within reach of those who are most likely to suffer from the want of it, and thus has a tendency to mitigate the virulence of any epidemic disease. The surgeons of such an institution also stand in a far more honourable position, than any other medical men with the same class of patients. The surgeon is here the friend of the sick, and never has the painful alternative of losing his time and medicine, of leaving or neglecting his patient in the hour of his greatest need, or of enforcing his claim by legal proceedings. The committee, therefore, believe that dispensaries of this kind, will not only add to the respectability of the profession, but that £250 a year, clear profit, is a greater remuneration than can be obtained by any private practitioners, from 2500 persons in the same condition in life.

We have much pleasure in subjoining to the above statement, the speech made by Dr. Conolly, at a general meeting of the subscribers, at Coventry, on March 29, 1832. In our opinion, the very comprehensive and dispassionate view he takes of the whole question, much enhances the value even of *his* approbation.

Dr. Conolly said that when he commenced practice, he could not fail to observe that there were many patients coming under the care of medical practitioners, who were unable to remunerate them, and yet not of a class wholly to rely upon, or even to apply for their gratuitous services; others there were who occupied much of the time of the general practitioners, without any intention of paying them; and a large class existed who were led, on the first occurrence of sickness, to apply to the parish, and add to the long list of paupers, thus losing their feelings of independence and respectability. Having often lamented these circumstances, it was with much interest that he attended a meeting at Southam, nine years ago, at which Mr. Smith detailed to several gentlemen of the county, equally distinguished by their station and by their enlightened benevolence, the plan of a Self Supporting Dispensary, calculated to meet and to remedy these evils. He had also had such ample opportunities of observing the deficient arrangements made, for providing medical and surgical attendance for the poor of parishes, and knew so many instances of their being taken out of the hands of the most respectable men, and entrusted to those who treated all their complaints in a careless and indiscriminate manner, that he was most anxious to see such alterations as would remedy these evils; and this, also, was a benefit promised by the Self-Supporting Dispensaries. Since that time he had, with the sanction of the

Warwickshire Committee, entered into an extensive correspondence with medical men, clergymen, and magistrates, on these subjects. From all parts of the kingdom he had received the same representations concerning the neglect of the sick poor, and the growth of pauperism out of the distresses of sickness: and these representations were, in 1827, embodied in a printed report. A committee had also been formed in London, which he had had opportunities of attending, and of which a Noble Lord, from whom a letter had been read, was a vice-president; and he had subsequently seen the reports of numerous dispensaries, established on the self-supporting plan. Cordially as he must express his gratification, on finding that a similar institution was established in a place so well adapted to show its working, as Coventry, and on seeing the judgment with which all its affairs were regulated, he could not forget that the Self-Supporting Dispensaries were yet vehemently opposed by many members of the medical profession, as being subversive of their immediate interests. He respected the members of his profession too much to disregard this opposition. It was impossible to address the public on the subject, and to overlook the possibility of being represented as one anxious to recommend himself to notice, by advocating a scheme of pretended benevolence, at the expense of a most industrious and respectable class of practitioners. Much, however, as he regretted the opinions entertained by them, he could not but consider them to be ill-founded; as he felt convinced, from all the attention he had been able to give to this subject, that their real interests would be consulted by the establishment of Self-Supporting Dispensaries; that they would, by means of these institutions, receive something, from a class of patients from whom, at present, they oftentimes do not receive anything. As to the very poorest class of patients, who, from honest feelings, now contrived to pay, out of their very small earnings, the expenses of unforeseen sickness; if the general practitioners objected to the relief which such poor and humble persons would derive from the new institutions, he could not carry his sympathy for the profession to the extent of regarding that objection: for it was evident that such poor people were often consigned, by the expenses of long sickness, to inevitable pauperism to the end of their lives. But he well knew that the general practitioners seldom entertained such an objection; that they had no wish to extort money from such poor persons, to whom, indeed, they gave up a larger portion of time and attention, than was at all convenient under the present system, or than it was at all reasonable to expect from them. It had been sometimes said that the physicians alone were in favour of Mr. Smith's plans, by the adoption of which they could lose nothing. He had, however, on many occasions, had the pleasure of meeting many and highly respectable general practitioners, who entirely approved of the plan, or of some modification of it. Besides which, the interests of the physicians could never really be sepa-

rated from those of the general practitioners, much less opposed to them. The interests of physicians were inseparably connected with the general welfare of the profession. If the general practitioner could not prosper, the physician could not exist. Nothing could injure the one, without being disadvantageous to the other. For himself, he would say, that he was not prejudiced for or against any plan. Let the Self-supporting Dispensary be considered as an experiment, an interesting and important experiment, requiring further trial. No where could it be better tried than at Coventry. If, after a trial, it did not answer the expectations that were formed of it, if it furnished arguments against itself, then let such arguments be advanced, and there could be no doubt that the gentlemen of the county and town, who supported it from the best and purest motives, would give to those arguments their most serious consideration. So long, however, as, instead of such arguments, the plan was only met by general objections—by unfounded accusations of improper motives—by sneers and personalities—those who sincerely wished to promote a good and charitable object, might well disregard them. He would take the liberty of saying, although in the presence of Mr. Smith, that from his long acquaintance with that gentleman, he felt convinced, if it could once be shown that his plan did not promote the cause of charity, without detriment to the just interests of the profession, long as he had devoted his time to it, and much as he had sacrificed to its promotion, he would at once abandon it altogether. On one part of the great experiment now making at Coventry, there could, he was happy to think, be no difference of opinion; and that was a part connected with the resolution with which he should conclude. The advantages of combining a visiting committee of ladies with a dispensary, were manifold. Every medical man familiar with the habits of the poor, well knew how inadequate mere medicines often were to restore them to perfect health. Sometimes a small donation of money could do what no prescription could do; and without comfortable clothing and suitable food, the best medicines were, in many cases, unavailing. When he had the honour to be physician to the dispensary at Stratford, some benevolent ladies of that town established a society for visiting the sick poor, and supplying them, under medical direction, with these and other needful auxiliaries; and he had many times remarked, with extreme satisfaction, the change made in the houses of the sick poor, after a visit from this excellent society. The increased cleanliness, comfort, and resignation, were such as no one could fail to perceive. In the performance of these kind and valuable duties, so consistent with their best feelings, he knew that the ladies of the committee of the Coventry Self-Supporting Dispensary had been most exemplary and indefatigable; he had, therefore, the greatest pleasure in proposing:—

"That the best thanks of this meeting be given to the Ladies' Committee, for their very kind and benevolent assistance."

ARTICLE IX.

Half-yearly REPORT *of the* BIRMINGHAM EYE INFIRMARY, *ending February* 29, 1832.*

BY MR. MIDDLEMORE

Assistant Surgeon to the Eye Infirmary.

Acute idiopathic conjunctivitis, 120. Chronic conjunctivitis, 50. Acute conjunctivitis, with pustules on the conjunctiva, 43. Acute conjunctivitis, with ulcer or pustule of the cornea, 38; (a) ditto, with puriform secretion, 31. Purulent conjunctivitis of newly born infants, 11. (b) Irritable conjunctivitis, 14. Strumous conjunctivitis (acute and chronic), 47. (c) Corneitis, 4. Vascularity of the cornea, 2. (d) Opacity of the cornea, 55. Conical cornea, 2. Staphyloma of the cornea, 3. Impaction of foreign bodies in the cornea, 9. Acute idiopathic sclerotitis, 5. Rheumatic sclerotitis, 4. Staphyloma of the sclerotica, 1. Acute iritis, with or without ulcer or opacity of the cornea, onyx, or hypopion, 36. Chronic iritis, 5. Syphilitic iritis, 1. Strumous iritis, 6. Prolapsus of the iris, 4. Vacillating state of the iris, 2. Cataract, 8. Dislocation of the lens, 2. Choroiditis, 3. Glaucoma, 4. (e) Amaurosis, of various kinds and degrees, 40. Diseases of the lachrymal passages, 13. Epiphora, 2. Strabismus, 3. (f) Tinea, 44. Lippitudo, 7. Hordeolum, 7. Ectropion, 3. Inflammation of the eye-lids, 15. Œdema of the eye-lids, 9. Ecchymosis of the eye-lids, 3. (g) Nœvus of the eye-lid, 1. Ptosis, 3. Adhesion of the eye-lid to the globe, 2. Tumours in the eye-lids, 9. Suppuration of the eye-ball, 3. Fungus of the eye-ball, (anomalous not hæmatoid), 1. Wound of the eye-ball and its appendages, 17. Disease of the bones of the orbit, of various kinds, 4.

* With regard to the mode of arranging the diseases, which has been adopted in this, and in my former Reports, I may mention that it has always been my custom, to enter each case under the title of its more prominent affection, when two or more diseases exist, at the same time, in the same eye; thus, if a patient were suffering from confirmed and decided glaucoma, and if, at the same time, the lens were merely slightly opaque, so little opaque that its degree of dulness was alone inadequate to explain the dimness of vision of which the patient complained, I should enter the case as one of glaucoma, and, of course, omit all mention of the cataractous symptoms; and if, on the other hand, the patient were suffering from loss of vision, accompanied by other amaurotic symptoms, and if, at the same time, the lens were dull, but merely so slightly dull, that that circumstance alone would not account for the absolute loss of sight, I should enter the case as one of amaurosis, and omit all mention of the cloudy state of the lens. Of course the whole of the morbid conditions are mentioned in the Eye Infirmary books, but, in presenting a summary of the cases for your Journal, I have thought it adviseable, for the convenience of arrangement, to adopt the plan now specified.

a—Of the cases included under the appellation—"acute conjunctivitis with puriform secretion," I may mention, catarrhal, gonorrhœal, and purulent (not infantile) ophthalmia.

b—Nearly all the cases of "irritable conjunctivitis" occurred in women, who were, or who had recently been, suckling; of course, all other things being equal, it will be most likely to take place where the period of lactation has been unusually protracted.

c—For the mode of treating many of those states of the cornea consequent on corneitis, I beg to refer to some remarks "on the use of unguentum argenti nitratis in certain morbid conditions of the cornea," contained in your 13th number.

d—Among the cases of "opacity of the cornea" I have included all its degrees, whether such opacity be situated superficially, or more deeply, or whether it be thin or dense, limited or extensive; and I have also included several cases where the cornea was rendered opaque from the contact of some heated or caustic substance, or of quick lime. Now, there are certain differences between an opaque state of the cornea produced by inflammation, and that occasioned by the contact of quick lime, or of some heated, caustic, or acid substance, which I am desirous of referring to, because there are circumstances under which it becomes most important to ascertain, whether the opaque state of the cornea be produced by the one or the other of these causes; and, in proof of the accuracy of this statement, I will adduce a case, which has very recently occurred under my own observation. A young gentleman, at Darlaston, was amusing himself with some gunpowder, which ignited, exploded, and in some way or other injured the eye, and cut the lids. The palpebræ became swelled, great chemosis and inflammation supervened, and on their subsidence the cornea was found to be densely opaque; and it then became a question whether this opacity was caused by inflammation, or produced by the direct application of heat to its surface, at the time the ignition and explosion occurred. I had no doubt but that it was produced by the application of heat, and, in conformity with that opinion, recommended that no measures, with a view to effect its removal, should be employed. I believe my opinion was considered, by another surgeon, who was consulted upon the case, to be erroneous. Of course, if the opaque state of the cornea do arise from the application of heat, or from the contact of quick lime, which has produced, at the time of such application, a great extent of mischief, no remedies will restore its transparency. If the opaque state of the cornea be produced by inflammation, without external ulceration, the cornea will retain its figure and magnitude, and generally its smoothness and equality of surface; it will not occur suddenly, and, as it were, at once; and its cause will be sufficiently detectable; but, when it arises from either the direct application of heat, or of quick lime, or of acids, to its surface, and from other similar causes,

the opacity will take place almost immediately, the cornea will shrink, it will assume a corrugated and shrivelled appearance, and will become densely opaque: and, if a cornea in this state be minutely examined after the death of the patient, it will be generally found to be opaque throughout the whole of its layers, its structure will be consolidated and rendered much more compact than it is naturally, and its lamellæ will not be moveable upon each other. When a small quantity of mortar gets beneath the lids, and is very promptly cleaned away, the opacity of the cornea, which sometimes follows, is not generally referrible, under such circumstances, to the mere contact of the caustic substance, but to the inflammation to which it gives rise: thus, the irritation produced by a small quantity of mortar, may excite ophthalmia, which ophthalmia may originate opacity of the cornea; but, in such a case, the opacity of the cornea is quite different from that loss of transparency which is produced by the contact of a caustic substance, and, moreover, follows its application at a distant interval. We distinguish opacity of the cornea, as it may be produced by a thickened and opaque state of its conjunctival covering (with vascularity, pannus) by deposition between it and the primitive corneal layer (nebula), by deposition within the interlamellar cellular membrane of the cornea (albugo), or by the deposition of an opaque lymphatic substance, which is intended to supply the place of any extensive loss of the true corneal substance (leucoma); but, when the opaque state of the cornea is caused by the prolonged application of a quantity of quick lime to its surface, its whole lamellæ are disorganized, they are rendered more compact and consolidated, shrivelled, and entirely and permanently opaque, the opacity being generally of a dirty yellowish or whitish colour.

e—The great number of amaurotic cases is thus explained; there are many persons who apply at the infirmary on account of a dimness of vision, unattended by any evident want of transparency in the humours of the eye, which it is scarcely right to term amaurosis, and yet, which if neglected, might terminate in the total loss of sight; such cases are entered in the books as instances in which there is a "tendency to amaurosis;" so that I wish it to be understood, that among the amaurotic cases, there are classed all those conditions of vision, varying from slight impairment to its total loss, not depending on a want of transparency in any of the humours or textures of the eye, and not associated with any other disease of that organ, not usually classed among the causes of amaurosis.

f—A great part of the cases of tinea occurred in scrofulous children, and were cured by the mild nitrated ointment, and a little aperient medicine, with the occasional application of a blister; but when this disease of the tarsal margins was combined with an eruptive state of the face, and a cachectic habit, in children, it was sometimes necessary to have recourse to the sulphate of quina.

g—A little girl, about six years old, had a small arterial nævus of the upper eye-lid, which was cured by the ligature; soon after its cure, the eye became very severely inflamed, and remained in that state for a considerable time, although the usual remedies were employed for its removal. It appeared that the blood which was usually sent to the nævus, being diverted from its course by the cure of the nævus, was forced, for the most part, into the vessels of the conjunctiva, and, until a certain interval had elapsed to enable them to assume their original dimensions, no remedies could effectually remove the inflammatory condition of the eye. This occurrence would not, of course, have taken place, if the cure of the nævus had been accomplished in a more gradual manner, the blood not being diverted from its usual route suddenly, and at once. I should certainly take advantage of the information this case yielded, in modifying the treatment of nævus in a similar situation, on future occasions.

ARTICLE X.

HOSPITAL REPORTS.

BY JOHN DARWALL, M. D.

Physician to the Birmingham Hospital, &c.

Dropsy, with Coagulable Urine.

The reports of Dr. Bright have called the attention of medical men to this subject within the last three or four years, and some singularly fortunate coincidences have been observed by other physicians, appearing to corroborate the doctrine which he has inculcated, that dropsy, with coagulable urine, is always connected with disease of the kidney, and that, indeed, the renal malady is in every case the origin; the diseases of the heart, the lungs, and the pleura, so often observable in these cases, being either actual consequences or ordinary concomitants. A little consideration, perhaps, I might add, a little less ignorance, would have prevented the London Journalists from at once adopting these views, for many cases were on record when Dr. Bright's book was published, which ought to have induced less exclusiveness in the deductions which that talented physician has drawn. In the year 1806, Dr. Wells read a paper to the Medical and Chirurgical Society, on the dropsy which succeeds scarlet fever, and in which the urine almost universally coagulates in a greater or less degree. In upwards of thirty cases which have come under my observation, I have not met with a single exception. Dr. Blackall a few years afterwards, and nearly at the very time at which Dr. Wells' paper was published, not only related several such cases, but also several in whom the urine coagulated after the exhibition of mercury, and some dissections, in none of which has he described any appearance that can be regarded as

similar to the morbid changes described by Dr. Bright. This does not, of course, in the slightest degree, diminish from the correctness of this physician's descriptions, but it ought to make us careful in coming, upon a few facts, to positive conclusions. The majority of cases of anasarca after scarlatina recover, neither is there usually any predisposition to a relapse. Most of the cases, also, which occurred after the exhibition of mercury, as related by Dr. Blackall, recovered, and in one case, related by Dr. Wells, the patient was alive and well nine years afterwards, although the urine afforded a coagulum still, upon being submitted to a boiling heat. These few contradictory facts appear to me to justify us only in inferring a morbid action in the kidneys in many of these cases, while Dr. Bright's reports lead us to believe that to many of these, organic disease of the kidney is superadded. But a more important point is the view which we ought to take of the pneumonic symptoms so often accompanying these cases. Dr. Bright's reports would lead us to believe these always consecutive, or, I ought rather to say, his deductions from his *reports*, for *they* do not support him, while my own experience leads me, in most instances (not in all) to an opposite conclusion. It must be manifest that this difference is very essential, and that it must give rise to very important differences in diagnosis, prognosis, and treatment. It is on this account that I now transmit the following cases, the two first of which will prove that the pulmonary disorder is not only sometimes the principal affection, but that the urine becomes healthy by attending to it only; the latter will serve to show that the presence of coagulable urine does not always indicate organic change in the kidney, even though this state of the urine should exist through many months.

Before proceeding farther, it is, perhaps, right to add, that Dr. Bright disclaims the exclusive views which the journalists have attributed to him, and, under these circumstances, it is to be regretted that his opinions were not more carefully guarded in the first instance.

Case of Cronic Bronchitis. Anasarca.

Job Hepwood, aged 35, by occupation a nailor, was admitted into the Hospital, Dec. 17th, 1831. General anasarca; abdomen distended, but no fluctuation apparent; complains of griping pains across the lower part of the abdomen; tenesmus; pulse, 68, laboured, full; urine very scanty, rendered very turbid by heat. Was first taken ill, five weeks ago, with a cold in his head, and bad cough, which lasted four or five days, but has none at the present time. There is, however, slight wheezing, and he complains of his breath, particularly when in bed. Sonorous rale on both sides, loudest on the left. Took some castor oil, last night, which operated well. V. S. ad ℥xvj. ℞ liq. ammon. acet. ℥ij. Tinct. colchici ℥ij. Tinct. digitalis ℥j. Infusi genistæ ℥vj. sumat. ℥iss. ℥tiâ quâque horâ. Potass. super. ad libitum.

Dec. 20.—The blood was firm, but not buffed; anasarca much diminished; abdomen quite flat; the breathing was greatly relieved by the bleeding; sonorous rale has nearly disappeared; bowels very open; urine scanty. Omittr potass. supertart. Cont. mistura.

22.—Swelling entirely gone; urine very scanty, still rendered turbid by boiling; bowels less open. Extr. hellebori nigri. Pulv. quinin, Myrrh. aa. ℈j. ft. pilulæ xx. 1 ter. die.

30.—No swelling any where; bowels open twice a-day; urine more plentiful, but not so plentiful as in health; appetite better: pulse, 84, full and firm; no cough or dyspnœa; urine very coagulable, nearly solid. ℞ infusi digitalis, ℥ss. ter. die.

31.—Has only taken one dose of the infusion. Urine without any coagulation.

Jan. 3nd, 1832.—Urine very much increased. Cont. medicamenta.

5.—Bowels costive; appetite bad; no œdema; urine not coagulable. ℞ pilul. hydrarg. gr. i. bis die sumend. ℞ infusi. gent. c. Infusi. sennæ c. Aq. menth. pip. a ℥ss. ter. die.

10.—Complains of pain across the loins; lumbago; bowels open; appetite better, generally improved. ℞ vini semin. colch. ℥ss. Decoct. cinchonæ ℥viiss. ℥j. ter. die sumend.

15.—The colchicum has purged and vomited him; the lumbago is gone. Omitte omnia.—Cured.

This man's case is remarkable, on account of a circumstance which appears in the report, but without any explanation. On the 30th of December, the urine was very coagulable, while, on the 31st, it contained no serum whatever. Now this change could not well be ascribed to the digitalis, for he had only taken one dose, and this not more than an hour before the report of 31st. The urine was examined on the 30th, an hour after his dinner, and it is probably to this, rather than to any thing else, that the presence of serum is to be attributed.

Anasarca. Pneumonia. Bronchitis.

Thos. Dayman, æt. 52. The face is red, bloated, and anasarcous, but free from anxiety. Pulse 96, full. There is considerable dyspnœa, with a sense of tightness across the chest, and a constant cough, accompanied by scanty, frothy expectoration. Pain, and a feeling of heaviness, is also experienced in the forehead, which is much increased by the cough; at night this is particularly the case, when the cough is worse, and he is unable to maintain the horizontal position, or to lie on the right side. The respiration is much the same on both sides of the chest, though it may be a little less perfect in the upper lobe of the right lung, as the "Râle crepitant humide" is here heard, mixed with the sonorous mucous rale, which is to be distinguished on both sides in the superior and middle portions of the chest. The legs are very anasarcous, as, indeed, is the whole surface of the body. There is no fluctuation in the abdomen. He makes

about three pints of bright amber-coloured urine in the twenty-four hours, which is of low specific gravity, (1018) and coagulates by heat; his bowels are moved once or twice daily, the evacuations being, by report, natural. He states that he works much amongst dust, being a cornmeter by trade, and that he has been long subject to cough; but his present complaints originated five days ago only, as he believes from taking cold, when he perceived his cough and breathing become worse; his face, also, swelled in the morning, and his legs at night; that he could lie down in bed before that time, but not well since; he now is obliged to sit up during the night, supported by pillows.

Feb. 24.—V. S. ad ℥xx. ℞ Vini antim. tart. ʒij. Mist. camphoræ, ℥vi. M ft. mist. sumat cochl. iij. 4tis horis. Ung. antim tart ʒij. ter die thoraci infricand.

27th.—The dyspnœa and cough are much relieved by the medicine; the bowels are freely open, and he makes two quarts of water in the twenty-four hours, which coagulates slightly by heat. The anasarca is not sensibly diminished. Pulse 98. Perst. misturâ cu adde, tincturæ digitalis gtts. x. sing. dos.

March 2.—Pil. hydr. gr. v. bis die.

5th.—Pulmonary symptoms better; pulse weak, 112; dropsy much the same; bowels open; urine without any coagulation. ℞ Ferri tartarizati ℥ss. Infusi genistæ ℥viiss. ℥iss tert quâque horâ Cont. pilulæ.

29th.—Convalescent; very slight œdema of the ancles at night. Cont. medicamenta.

April 6.—Dismissed cured.

Both these cases completely recovered; but, it is important to remark that, in this last case, although the pulmonary symptoms had nearly disappeared on the twenty-seventh of February, the dropsy remained without any manifest improvement till the fifth of March, at which time the ferrum tartarizatum was given. From this time his amendment was progressive, the anasarca disappeared as he gained strength, and when he left the hospital he was perfectly well.

The next case, Dominic Doran, resembles, in its symptoms, those of Dr. Bright very accurately; yet no disease was discoverable in the kidneys, excepting an unusual paleness. Both Mr. Wood and Mr. Hodgson, whose competency to pronounce upon the subject will not be questioned by any one, regarded the structure of these organs as natural.

Anasarca and Ascites.

January 20.—Dominic Doran, aged 40. Began with œdema of the lower extremities a fortnight ago. Some cough, with slight sonorous rale; pulse 84, soft; urine scanty and high coloured, rendered nearly solid by heat; bowels open three times yesterday. A month ago appears to have had an attack of bronchitis, which had completely disappeared before the effusion took place. The right thigh is very tender. V. S. ad ℥xx. Hydrarg. submur.

gr. ij. Pulv. jalapæ gr. v. Sit pulvis 4 ta quâque horâ sumendus donec alvus solvatur.

Several months ago he suffered from severe rheumatic pains, but these had quite left him, for six months, before the attack upon his chest.

22nd.—The blood was cupped and buffed. There is much less tenderness in the right thigh. Urine scanty and very high coloured, rendered nearly solid by boiling. The bowels have been well opened by the powders. Pulse 84, very soft. Anasarca the same. Ascites, if anything, worse. Sumat Infusi nicotianæ guttas xxx. 3tiâ quâque horâ ex haustu infusi lini.

23rd.—There is no pain, on pressure, in the thighs. Anasarca and ascites much the same. Urine more plentiful, very high coloured, but is not rendered quite so solid by boiling. The medicine has not made him sick at present. Pulse 84, soft. This treatment was continued till the 5th of February, when the specific gravity of his urine was taken, and found to be (1023) it tinged blue litmus paper red. On the first application of heat coagulation commenced, and continued till a white dense substance rose to the top, occupying a third of the liquor. Bowels open; pulse 85.

8th.—The ascites is increased since yesterday morning. Anasarca is decreased considerably. Complains of paid in the back and great weakness. Urine more copious, of a light amber colour, and coagulates by boiling. Specific gravity the same. Bowels open; pulse 16.

9th.—He has slept well during the night; complains still of great weakness. He takes half a pint of gin and water daily; the pain in the back is not so violent; urine high coloured, but free from sediment; bowels open; pulse 86, full; appetite good.

13th.—There has been no material change in this case since the report on the ninth; he is much better this morning, he was able to sit up for an hour. Has voided nearly a quart of urine since yesterday morning, which is high coloured, but free from sediment; it coagulates slightly by boiling; the specific gravity is (1017,) does not affect litmus paper. On the eleventh he began to take a grain of sulphate of quinine three times a day.

None of the remedies which were employed had the slightest effect. On the 10th of February he was sick and purged, and died on the 22nd, at 4, a. m.

Sectio cadaveris, 28 *hours after death.—The body* was very pale and anasarcous, though this appeared somewhat less than during life; the skin of the scrotum, thighs and legs, was a little inflamed from distention. There was evident fluctuation in the belly.

Thorax—The lungs had contracted no adhesions, and were considered as sound as is commonly found at the age of 40; they were darker, and contained a little more serum than in the perfectly healthy state. There was about half a pint of bright straw-coloured serum in the right thoracic cavity, and a pint on the left. *The heart* was unusually small, its muscular parietes

on the *right side*, very much extenuated, whilst on the *left*, they were proportionately so much thickened, as to constitute hypertrophy of the ventricle; the valvular portions were complete on both sides, and the large vessels healthy; like the heart, they contained a small quantity of dark coagulated blood.

Abdomen.—Nine pints, or thereabouts, of the same straw-coloured serum as that found in the chest, was removed from this cavity. The viscera did not deviate from their usual position; the *liver* was smaller than usual, of a bluish colour externally, streaked with irregular lines of a lighter hue, so as to resemble very closely the lung of an old subject; its surface was uneven, and its structure very firm and dense, not at all resembling liver, but rather the gluteus maximus of an old woman when cut across.

The gall bladder was distended with bile of a dark colour; its ducts were free and natural. *The pancreas* was very fine, and closely connected with some enlarged absorbent glands in the lesser omentum. *The kidneys* were minutely examined, and considered to differ from the healthy state, only in their cortical portions being paler and of a looser structure; in short, they were the kidneys of a *dram* drinker. The other viscera, as well as the *brain*, presented nothing unusual.

To these cases I shall add that of another man, who died from pulmonary apoplexy, united with disease of the heart. He had repeatedly suffered from bronchitis, and was anasarcous some time before his death. His urine, in the earlier stages, only slightly coagulated; but, the day before his death, it coagulated very strongly.—The following were the appearances upon dissection. The effusion in the lower extremities was considerable. The lungs were healthy in appearance externally, but universally œdematous. The trachea and bronchi were reddened, and contained a considerable quantity of coagulated blood. The lungs, in the neighbourhood of the larger bronchi, were rather granulated, but no where hepatized. The heart was of an enormous bulk, twice, if not three times, its natural size. The right side was thiner in its walls, and its cavity was more capacious than usual. The left cavities were also more capacious than is common, but their walls were not thickened. The mitral and tricuspid valves were quite sound. The aorta throughout was diseased. The sigmoid valves were fixed and cartilaginous; and much narrowed the caliber of the vessel. The root of the aorta, to the origin of the arteria innominata, was excessively dilated. The liver was healthy; the vena portæ contained no firm coagulum. *Both kidneys were remarkably free from disease.*

The above cases are taken from the reports of the hospital; the next is from my private case book.

I saw Mrs. —— for the first time, on the 3d of November, 1831. At this time she was suffering from dyspnœa, palpitation of the heart, cough, etc. There was slight œdema of the eyelids in the morning, and of the ancles at night. The catamenia

were regular, but scanty. She had suffered, for nearly three years, from pain in the left side; and, in the summer of 1830, had a slight palpitation of the heart. On Christmas-day, 1830, she was suddenly seized with very violent palpitation of the heart while in bed, attended with severe dyspnœa, and which lasted three quarters of an hour. She, next day, was very stiff and scarcely able to stand. From this time very little exertion would produce palpitation and dyspnœa. She had much emaciated.

About the 23d of November, she became generally dropsical, and the urine coagulated; and it continued to coagulate as long as she lived. She died on the 2d of February, 1832, having been repeatedly emptied, and having, as repeatedly, suffered from the attack of pleurisy, for which she was bled, etc. About a fortnight before her death the effused fluid disappeared, and did not return.

Sectio Cadaveris.—The brain was quite healthy.

Chest.—Extensive effusion in both cavities of the pleura. Right lung healthy in its colour; rather œdematous. Left lung reduced, by the pressure of the effused fluid, to one-fourth its natural volume; universally covered with flakes of coagulable lymph; and, in some parts, united, particularly in the inferior part, with the pleura costalis. The lung itself was much condensed and hardened; the inferior lobe was inflamed.

The heart was very large. No disease in the valves. Aorta twice the natural size; slight ossific deposit over its surface. Sigmoid valves healthy. Muscular structure of the heart very soft; and breaking down, under the finger, like liver. Liver nutmeggish. Gall stones in gall bladder. Kidneys unaltered in structure. Tubular and cortical part quite distinct. On the convex edge of the left kidney, there was a large cyst containing fluid, but not involving the structure of the gland: this kidney was rather softer than usual.

The two next cases are also from my private case book.

The first was a man who was a painter by trade, and of a scrophulous habit. I saw him, for the first time, about three months before his death. He was, at this time, anasarcous; very subject to sickness; his urine coagulated, and there was great dyspnœa. The dropsy had commenced in the face, and he had formerly suffered from nephritic symptoms, but previously to the appearance of the dropsy.

S. C.—Three pints of serum were found in the abdomen. The chest was filled with serum. The lungs externally healthy, and free from all adhesions. The heart was enormously enlarged; the mitral valves thickened; and, though not apparently suffering much obstruction, the left auricle was very large. The walls of the left ventricle were greatly hypertrophied. The aorta was healthy. The liver soft and light coloured, otherwise healthy. The left kidney was much wasted, and the pelvis greatly enlarged, contained several large calculi. The

structure of what remained of this kidney was particularly healthy. The right kidney exhibited a tubercular appearance externally, particularly at one end; internally it resembled a nutmeg in colour, and this colour spread into the tubercular part, which was very indistinct. The kidney had slightly the appearance of pulmonary tubercles, when they have coalesced and softened, but not discharged.

It can scarcely be doubted that the original disease, in this case, was in the kidney, unless, indeed, we can suppose the disease of the heart to have existed without any symptoms. The nephritic disease long preceded the dropsy, and he had, I was informed, for several years been under medical treatment on this account.

The last case I shall mention, I saw only once, and that a few days before her death. She had then irregular action of the heart, and was anasarcous. The urine *did not coagulate.*

S. C.—The lungs were filled with tubercles. The pericardium contained several ounces of serum. The heart was enlarged; and at the root of the aorta there was a small aneurism. The kidneys exhibited an appearance very similar to figure 2, plate iv. of Dr. Bright's book.

ARTICLE XI.

PAROCHIAL RETURNS of Births, Marriages, and Burials, that have been registered in the several parishes of the City and Suburbs of Worcester, including those of the several congregations who dissent from the Established Church, between the 1st of January and the 1st of April, 1832.

Births, 274; Marriages, 74; Burials, 258.

THE present Number completes the third volume of the Midland Reporter, and with it, the Work, under the above name, will terminate: as the Editors can now congratulate themselves and the Public, upon having attained the great object which they contemplated at the commencement of their arduous undertaking. Their appeal to the public spirit, generous feelings, and pure love of Science, which so extensively pervade and dignify our noble Profession, has not been made in vain. A wish has, in consequence, been warmly expressed and widely circulated, that the Members of the Profession, residing in the Provinces, should unite themselves into an Association *friendly* and *Scientific:* that this Association should have for its main object the diffusion and increase of Medical Knowledge in every

department of science and practice ; and that the valuable communications of its Members should, from time to time, appear in the shape of the published Memoirs of the Society. The subjoined Prospectus will afford to our Readers more minute information upon this truly gratifying topic. We here, then, take leave of our numerous friends and correspondents, thanking them most cordially for the valuable aid they have afforded us in the prosecution of our past labours ; congratulating them most sincerely on the means of widely-spread and friendly co-operation which the new Society will open to us all ; and earnestly intreating them to join us with head, and heart, and hand, in the support of so excellent an Association.

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